RAIRO -Theoretical Informatics and Applications

Priyanka R. Gondaliya

Assistant Professor, Sardar Patel College of Engineering, Bakrol, India
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ABSTRACT—

RAIRO : RAIRO, an abbreviation for "Recherche Opérationnelle" (Operations Research), is a scholarly journal dedicated to the exploration and advancement of operations research and its various applications. The journal is committed to publishing original research articles that demonstrate a high level of scientific rigor in the domain of theoretical computer science and its practical uses. The scope of theoretical computer science is interpreted broadly and includes, but is not limited to, the following areas: automata and formal languages, game theory, rewriting systems, algorithm design and analysis, complexity theory, quantum computation, concurrent, distributed, and parallel computing, program verification and compilers, computational geometry, computer graphics, cryptography, and combinatorial studies on words. This enumeration is not exhaustive, and the editorial board encourages the exploration of emerging research fields that may develop in the future. The journal encompasses topics related to Computer Science Applications, Mathematics (miscellaneous), and Software. It is published by EDP Sciences, which evaluates the scientific impact of journals by considering the number of citations received and the significance of the journals from which these citations originate. The SJR (SCImago Journal Rank) serves as an alternative metric to the Journal Impact Factor, reflecting the average number of citations received over the past two years. This journal has achieved an h-index of 30, underscoring its commitment to high-quality original research in theoretical computer science and its applications.

Introduction :-

Applied Computing and Informatics is dedicated to the timely dissemination of cutting-edge knowledge to researchers, practitioners, and academics interested in the latest advancements in applied computing and information systems. The journal particularly encourages research that significantly contributes to the ongoing development and enhancement of IT practices within the Kingdom of Saudi Arabia and beyond. In this regard, it seeks to bridge the divide between academia and industry, welcoming research studies that are both theoretically robust and methodologically rigorous, addressing a variety of IT-related challenges and innovations of a practical nature. The journal serves as a platform for practitioners, researchers, managers, and IT policymakers to exchange knowledge and experiences regarding the design, development, implementation, management, and evaluation of diverse IT applications. Contributions may encompass, but are not limited to: • Internet and E-Commerce Architecture, Infrastructure, Models, Deployment Strategies, and Methodologies. • E-Business and E-Government Adoption. • Mobile Commerce and its Applications. • Applied Telecommunication Networks. • Software Engineering Approaches, Methodologies, Techniques, and Tools. • Applied Data Mining and Warehousing. • Information Strategic Planning and Resource Management. • Applied Wireless Computing. • Enterprise Resource Planning Systems. • IT Education. • Societal, Cultural, and Ethical Issues of IT. • Policy, Legal, and Global Issues of IT. • Enterprise Database Technology. • IT Effectiveness and Performance Management. • Geographical Information Systems. • IT Investment and Project Management. • Knowledge Management and IT Transfer. • Enterprise Application Integration. • Information and Internet Security. • Applied Aspects of Arabization. • Agent Technologies and their Applications. • IT and Organization. Open Access

Fig.
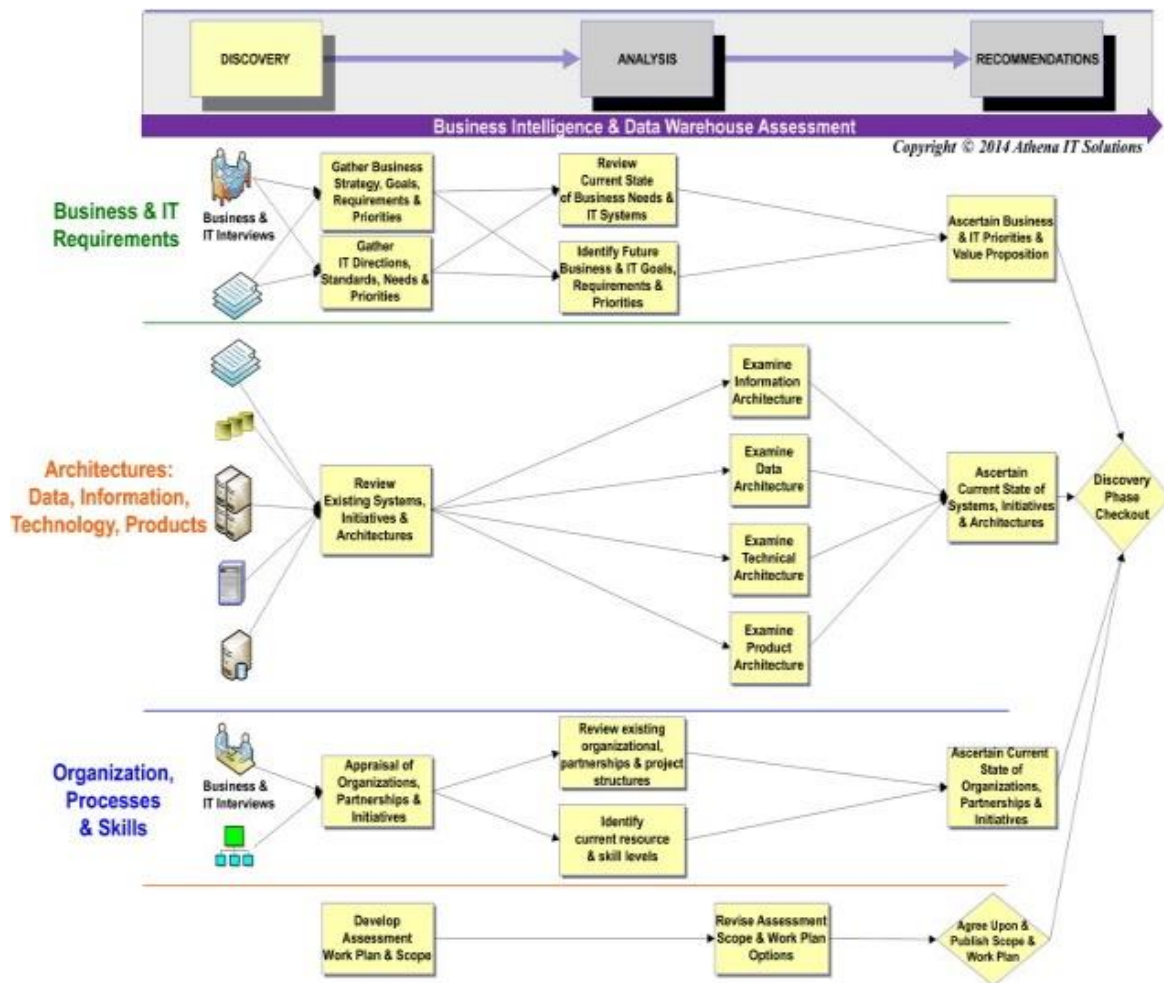
Information technology architecture

RAIRO - Theoretical Informatics and Applications Impact Factor 2019-2020 The impact factor (IF) for RAIRO - Theoretical Informatics and Applications in 2019 is recorded at 0.138, calculated in 2020 according to its established definition. This figure represents a decrease of 0.14, equating to an approximate percentage change of -51.06% when compared to the previous year, 2018, indicating a downward trend. The impact factor (IF), also referred to as the Journal Impact Factor (JIF), serves as a metric for the average number of citations received by recent articles published in the journal over the course of a year. This data is sourced from Web of Science. Impact Factor Trend

_____Yearly Impact Factor (IF) for RAIRO - Theoretical Informatics and Applications, derived from Web of Science data. Year Impact Factor (IF) 2020/2021 Coming Soon 2019 0.138 2018 0.282 2017 0.350 2016 0.558 2015 0.319 2014 0.327 2013 0.179 2012 0.176 2011 0.397 2010 0.506 RAIRO - Theoretical Informatics and Applications Impact Score 2020-2021 The impact score (IS) for RAIRO - Theoretical Informatics and Applications in 2020 is noted as 0.77, calculated in 2021 in accordance with its definition. This score reflects an increase of 0.5, resulting in an approximate percentage change of 185.19% compared to the previous year, 2019, indicating a positive trend. The impact score (IS), also known as the Journal Impact Score (JIS), quantifies the average number of citations to recent articles published in the journal annually. This information is based on Scopus data. RAIRO - Theoretical Informatics and Applications Impact Score 2021 Prediction The impact score (IS) for 2020 of RAIRO - Theoretical Informatics and Applications stands at 0.77. Should the current upward trend continue, it is anticipated that the impact score may further increase in 2021. Impact Score Trend Yearly Impact Score (IS) for RAIRO - Theoretical Informatics and Applications, based on Scopus data.

RAIRO - Theoretical Informatics And Applications

SCR Journal Impact Factor History

- 2020 Impact Factor0.769

- 2019 Impact Factor0.258

- 2018 Impact Factor0.477

- 2017 Impact Factor0.457

- 2016 Impact Factor0.829

- 2015 Impact Factor0.432

- 2014 Impact Factor0.750

- 2013 Impact Factor0.526

- 2012 Impact Factor0.538

- 2011 Impact Factor0.698

- 2010 Impact Factor0.561

- 2009 Impact Factor0.438

- 2008 Impact Factor0.400

- 2007 Impact Factor0.770

- 2006 Impact Factor0.870

- 2005 Impact Factor0.737

- 2004 Impact Factor0.500

- 2003 Impact Factor0.509

- 2002 Impact Factor0.471

- 2001 Impact Factor0.400

- 2000 Impact Factor 0.390

RAIRO - Theoretical Informatics and Applications

2020 Impact Factor by Web of Science

Index

SCIE/SSCI

Impact Factor

0.138

by WOS

Ranking

12739

by WOS

RAIRO - Theoretical Informatics and Applications

2020 SJR, SJR Impact Factor and H Index

H Index

30

SJR

0.213

Scopus Impact Factor

0.726

RAIRO - Theoretical Informatics and Applications

2020 SJR Impact Factor 2-year, 3-year, 4-year

2-year
Impact Factor

0.769

3-year
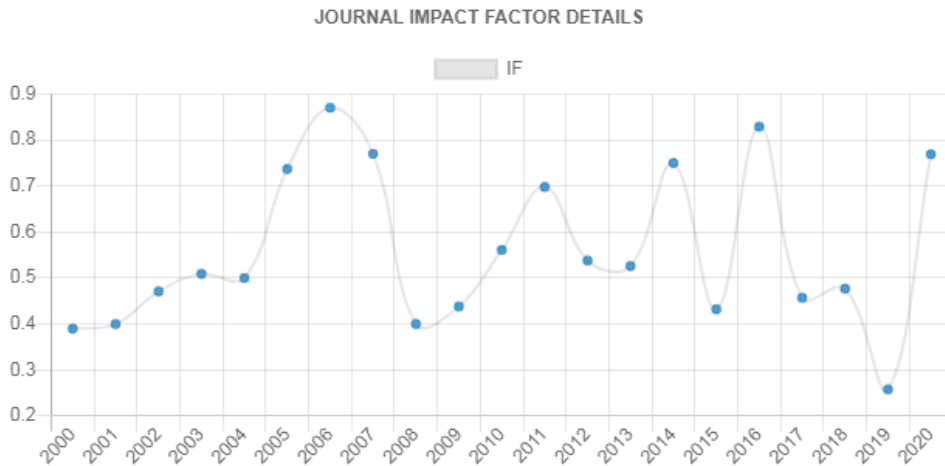*Impact Factor*

0.714

4-year
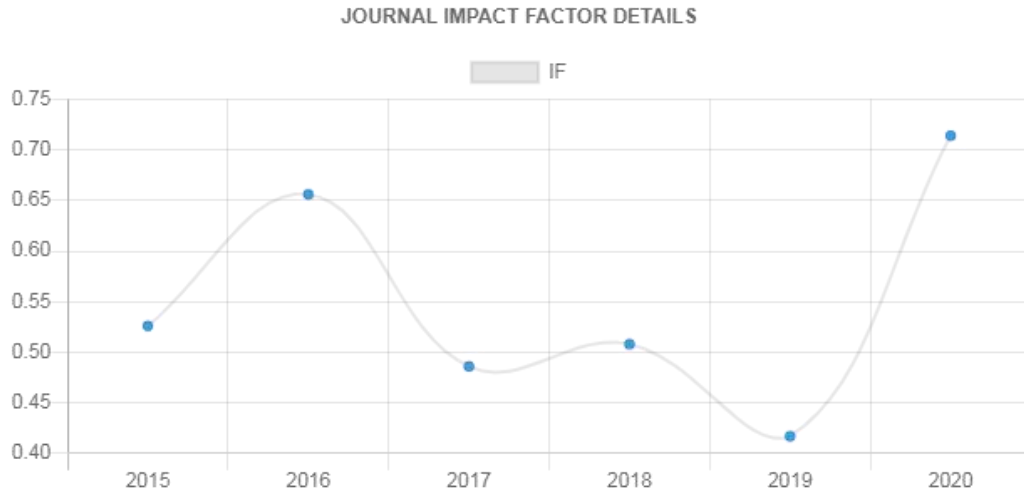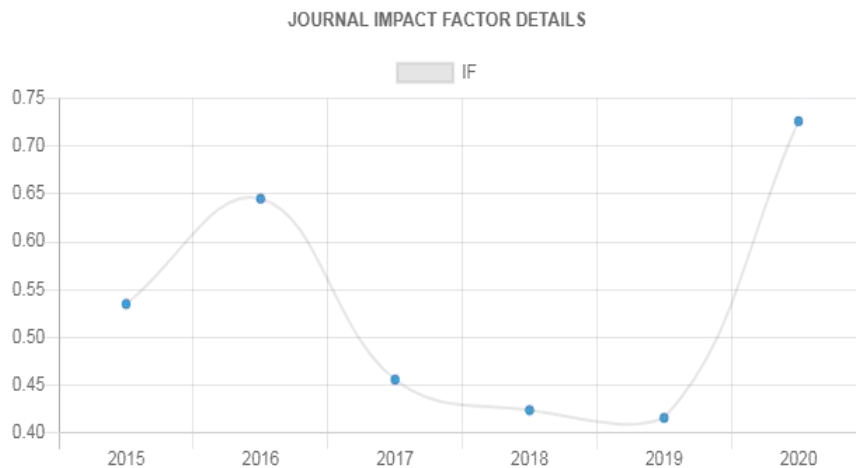*Impact Factor*

0.726

Scope/Description:

The journal publishes original research papers of high scientific level in the area of theoretical computer science and its applications. Theoretical computer science is understood in its broadest sense and comprises in particular the following areas: automata and formal languages, game theory, rewriting systems, design and analysis of algorithms, complexity theory, quantum computation, concurrent, distributed, parallel computations, verification of programs, "logic" and compilers, computational geometry and graphics on computers, cryptography, combinatory on words. This list is not supposed to be exhaustive and the editorial board will promote new fields of research that will be worked out in the future.

RAIRO - Theoretical Informatics And Applications

Scopus 2-Year Impact Factor Trend

JOURNAL IMPACT FACTOR DETAILS

RAIRO - Theoretical Informatics And Applications

Scopus 3-Year Impact Factor Trend

JOURNAL IMPACT FACTOR DETAILS

RAIRO - Theoretical Informatics And Applications

Scopus 4-Year Impact Factor Trend

JOURNAL IMPACT FACTOR DETAILS

Use

The impact factor is used to compare different journals within a certain field. The Web of Science indexes more than 11,500 science and social science journals. Journal impact factors are often used to evaluate the merit of individual articles and individual researchers. This use of impact factors was summarised by Hoeffel:

Impact Factor is not

a perfect tool to measure the quality of articles but there is nothing better and it has the advantage of already being in existence and is, therefore, a good technique for scientific evaluation. Experience has shown that in each specialty the best journals are those in which it is most difficult to have an article accepted, and these are the journals that have a high impact factor. Most of these journals existed long before the impact factor was devised. The use of impact factor as a measure of quality is widespread because it fits well with the opinion we have in each field of the best journals in our specialty....In conclusion, prestigious journals publish papers of high level. Therefore, their impact factor is high, and not the contrary.

Eugene Garfield

In brief, Impact factors may be used by:

- Authors to decide where to submit an article for publication.

- Libraries to make collection development decisions

- Academic departments to assess academic productivity

- Academic departments to make decisions on promotion and tenure.

As impact factors are a journal-level metric, rather than an article- or individual-level metric, this use is controversial. Garfield agrees with Hoeffel,but warns about the "misuse in evaluating individuals" because there is "a wide variation [of citations] from article to article within a single journal". Other things to consider about Impact Factors:

- Many journals do not have an impact factor.

- The impact factor cannot assess the quality of individual articles. Even if citations were evenly distributed among articles, the impact factor would only measure the interests of other researchers in an article, not its importance and usefulness.

- Only research articles, technical notes and reviews are "citable" items. Editorials, letters, news items and meeting abstracts are "non-citable items".

- Only a small percentage of articles are highly cited and they are found in a small subset of journals. This small proportion accounts for a large percentage of citations.

- Controversial papers, such as those based on fraudulent data, may be highly cited, distorting the impact factor of a journal.

- Citation bias may exist. For example, English language resources may be favored. Authors may cite their own work.

Moreover, informed and careful use of these impact data is essential, and should be based on a thorough understanding of the methodology used to generate impact factors. There are controversial aspects of using impact factors:

- It is not clear whether the number of times a paper is cited measures its actual quality.

- Some databases that calculate impact factors fail to incorporate publications including textbooks, handbooks and reference books.

- Certain disciplines have low numbers of journals and usage. Therefore, one should only compare journals or researchers within the same discipline.

- Review articles normally are cited more often and therefore can skew results.

- Self-citing may also skew results.

- Some resources used to calculate impact factors have inadequate international coverage.

- Editorial policies can artificially inflate an impact factor.

Impact factors have often been used in advancement and tenure decision-making. Many recognize that this is a coarse tool for such important decisions, and that a multitude of factors should be taken into account in these deliberations. When considering the use of the impact factor (IF), keep these aspects in mind:

- IF analysis is limited to citations from the journals indexed by the Web of Science/Web of Knowledge. Currently, the Web of Science indexes only 8621 journals across the full breadth of the sciences, and just 3121 in the social sciences.

- A high IF/citation rate says nothing about the quality -- or even, validity -- of the references being cited. Notorious or even retracted articles often attract a lot of attention, hence a high number of citations. The notoriety related to the first publication on "cold fusion" is one such example.

- Journals that publish more "review articles" are often found near the top of the rankings. While not known for publishing new, creative findings, these individual articles tend to be heavily cited.

- The IF measures the average number of citations to articles in the journal -- given this, a small number of highly-cited articles will skew the figure.

- It takes several years for new journals to be added to the list of titles indexed by the Web of Science/Web of Knowledge, so these newer titles will be under-represented.

- It's alleged that journal editors have learned to "game" the system, encouraging authors to cite their works previously published in the same journal.

Comparing Journals Across Disciplines? Not a good idea! Using Impact Factors within a given discipline should only be done with great care, as described above. Using impact factor data to compare journals across disciplines is even more problematic. Here are some of the reasons:

- Disciplines where older literature is still referenced, such as Chemistry and Mathematics, offer challenges to the methodology since older citations (older than two years) are not used to calculate the impact factor for a given journal. (Five-year impact factor analysis, which can be calculated using the Journal Citation Index database, helps smooth out this problem only to some degree.)

- Different disciplines have different practices regarding tendency to cite larger numbers of references. Higher overall citation rates will bump upward impact factor measurements.

- Where it's common for large numbers of authors to collaborate on a single paper, such as in Physics, the tendency of authors to cite themselves (and in this case, more authors) will result in increased citation rates.

Pros and Cons of the Impact Factor:-

Pros:

- A vetted, established metric for measuring journal impact within a discipline.

- Designed to eliminate bias based on journal size and frequency.

Cons:

Individual articles makes an uneven contribution to overall Impact Factor.

- Impact Factor does not account for certain things, things like context (positive or negative citation) and intentionality (self-citation).

- The metric is proprietary to and bound by the contents of the Thomson Reuters database.

- Citations, on which the Impact Factor is based, count for less than 1% of an article's overall use.

Criticism

There have been numerous critiques concerning the utilization of impact factors. A study conducted in 2007 identified a significant flaw: impact factors represent the average of data that do not follow a normal distribution, suggesting that the median would be a more suitable measure. Additionally, there exists a broader discourse regarding the legitimacy of the impact factor as an indicator of journal significance, as well as the potential policies that editors might implement to enhance their impact factor, which could adversely affect both readers and authors. Further criticism addresses the influence of impact factors on the behavior of scholars, editors, and other stakeholders. Some critics argue that the focus on impact factors is a byproduct of the detrimental effects of neoliberal policies on academia, asserting that it is essential not only to replace impact factors with more advanced metrics for scientific publications but also to engage in discussions about the societal value of research assessment and the increasing instability of academic careers in higher education. Experts emphasize the limitations of using impact factors to assess a scholar's contributions. Several reasons are cited for the inadequacy of relying solely on impact factors to evaluate an individual's output, including: • A singular metric is insufficient for assessing an author's contributions. • The value of journals is meaningless without comparative analysis within the same discipline, as impact factors differ across fields. • The impact factor was initially designed to reflect the influence of a specific journal rather than an individual scholar, and the quality and significance of an author's work may surpass the impact of any particular journal.

Abbreviation:-

The ISO 4 standard abbreviation for RAIRO - Theoretical Informatics and Applications is RAIRO - Theor. Inform. Appl. This abbreviation, 'RAIRO - Theor. Inform. Appl.', is highly recommended and officially sanctioned for indexing, abstraction, referencing, and citation purposes, fulfilling all essential criteria of the ISO 4 standard. The journal is dedicated to publishing original research papers of significant scientific merit within the realm of theoretical computer science and its applications. The scope of theoretical computer science is interpreted broadly, encompassing areas such as automata and formal languages, game theory, rewriting systems, algorithm design and analysis, complexity theory, quantum computation, concurrent, distributed, and parallel computations, program verification, logic and compilers, computational geometry and graphics, cryptography, and combinatorial studies on words. This enumeration is not exhaustive, and the editorial board is committed to fostering new research domains that may emerge in the future. Theoretical Informatics and Applications serves as a scientific journal concentrating on the theoretical dimensions of computer science and their practical applications, publishing research across various fields including algorithms, complexity theory, automata, and formal languages, among others.

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