

A Bibliometric Review of Journal of Internet Services and Information Security: An Analysis of Research Published between 2019 and 2024

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Received: July 17, 2024; Revised: August 25, 2024; Accepted: September 26, 2024; Published: November 30, 2024

Abstract

The Journal of Internet Services and Information Security (JISIS) established its standing as a leading platform for publishing advanced, multidisciplinary research on a wide range of technologies. The goal of the study is to demonstrate the impact and contribution of the JISIS by providing a complete overview of its academic structure based on articles published between 2019 and 2024 using bibliometric analysis. In order to illustrate the journal's significance, conceptual framework, and most prolific and significant writers as well as the sources of JISIS's information inflow a complete data collection containing 130 publications was examined. Various topics reviewed in JISIS over the five distinct sub-periods were found by the thematic analysis results. The main objective of this research is to analyze the journal's current state and identify its future focus and direction.

Keywords: JISIS, Analysis, Internet Services, Information Security, Technology, Bibliometric, Thematic Analysis.

1 Introduction

In 2011, the Bonfring Organization established the Journal of Internet Services and Information Security (JISIS) as its official journal. The main goal of JISIS's is to offer a productive way of publishing novel research findings and innovative development outcomes that are relevant to all aspects of information security and Internet services. JISIS has four issues per each year. It accepts unique, excellent submissions in the following formats: research papers, reviews, surveys papers, and regular articles. The journal JISIS is open access. As such, all articles will be available for free download from this website after undergoing peer review and acceptance.

Journal of Internet Services and Information Security (JISIS), volume: 14, number: 4 (November), pp. 377-388.
DOI: 10.58346/JISIS.2024.14.023

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The journal is included in several popular databases, including Scopus, DBLP, DOI, Google Scholar, Directory of Open Access Journal (DOAJ). As per Scopus, JISIS had a Cite Score of “4.2” in 2024 and h-index of 12 (Scopus, 2023). In 2023, the JISIS journal's SCImago Journal Rank (SJR) was 0.350. The JISIS publications obtained an average of 0.997 citations from other journals in their subject area in 2023, according to the organization's Source Normalized Impact Per Paper (SNIP) score of 0.997 in 2023. The publication was ranked 402 in the field of computer science Application, 341 in the domain of Electrical and Electronic Engineering, 186 in the Information Systems, 189 in Computer Networks and Communications, 49 in Computer Science, and 217 in Software in Scopus. Based on a variety of qualitative and quantitative evaluations and metrics, the journal has established an acceptable track record throughout the years as a leading source of academic knowledge.

The purpose of this research is to provide a bibliometric review of the JISIS Journal in order to provide a five-year review of the article from 2019 to 2024. When a journal reaches a major milestone, it is common in the literature to conduct a comparative analysis of certain journals that focuses on an objective review of both the development and performance of such publications (Kumar et al., 2020; Sigala et al., 2021). A journal's value can be increased by bibliometric studies focused on a single journal because they provide fundamental journal features like content, citation structure, publications, trends, geographic distribution, themes, and collaboration patterns (Fu & Ho, 2015; Hunt et al., 2013; Železnik et al., 2017) every academic journal has a fundamental responsibility that must be dutifully fulfilled at particular times. This (Dant & Lapuka, 2008) duty is to conduct a confidential, corresponding meta-analysis of the journal's cumulative intellectual and research contributions and its developmental legacy in order to evaluate the journal's current state and define a plan for its future focus and direction. According to (Kevin et al., 2009), journal performance analysis typically utilizes bibliometric analysis since it can yield independent and reliable data. The Scopus database provided the information about the 535 articles. The articles in JISIS were examined using the analytical program "Bibliometric."

2 Overview

2.1. Data Collection

The Scopus database was used by the study to gather the JISIS articles published from 2019 to 2023. One of the biggest databases for abstracts and citations was introduced by Elsevier, enabling users to search and extract the necessary information. This database is frequently used in the Computer Science and Engineering. Since 2019 is the year that JISIS was indexed in the Scopus database, it was chosen as the study's starting point (Scopus, 2023).

The research used the "Title" option to search the "Journal of Internet Services and Information Security " in the Scopus "Sources" section in order to extract articles. This search method produced 19 documents in the year of 2019, 25 documents in the year of 2020, 21 documents in the year of 2021, 36 documents in the year of 2022, 51 documents in the year of 2023 and 37 documents in the year of 2024. So, a total of 189 documents were found using this search method. Then, the research verified that the articles were appropriate for the final study. Among the 189 issues we chose all around the cleaning process, we found editorials, news and notifications, disclosures, etc. The abstracts and keywords were not very similar, and these papers weren't subjected to peer review, we removed every one of the papers that had been published in JISIS between 2019 and 2023 (Aria et al., 2020). Finally, 130 articles represented the data collection that was finalized for the study of bibliometric.

2.2. Selection of Bibliometric Tool and Data Analysis

Using a variety of bibliometric elements, including the articles and reference frameworks, most significant publications, highest-producing and significant authors, and knowledge inflow. The productivity structure, citations, and publications has been analysed. Thematic analysis was used to examine the conceptual framework of the publications published by JISIS. The method of thematic analysis provided (Cobo et al., 2011) was used in this work to identify, measure, and describe the development of JISIS's themes. Then, the social structure was identified and defined using collaborative analysis. To find the collaborative communities (clusters) of authors and countries, we use author analysis of partnership combined with county analysis of collaboration in this research. In addition, the study provides a complete understanding of the collaboration structure used in JISIS by visualizing the standard of partnership, the authorship behaviours, and the collaboration rating. Finally, it used SJR metrics to identify average prestige per article," in which the journals are ranked.

3 Analysis of Citation Score

3.1. Publication and Citation Structure

The study begins by providing a background of the data in order to give an in-depth review of JISIS with the reference to author collaboration, documents, and document contents. According to study publications collected from the Scopus records, all relevant historical context data related to JISIS from the years 2019 to 2023 presents in Table 1.

Table 1: Key Facts Regarding JISIS Journal

Key facts regarding JISIS Journal	
Time Period	2019-2023
Publications	130
Each articles Average citations	4.03
Each articles Average citations per year	4.01
Authors	553
Single-authored articles	12
Multi-authored articles	541

This provides a detailed explanation of the important details related to JISIS journal. From 2019 to 2023, 130 papers were published in the journal. The average citations per articles is 4.03 and average citations per year per articles is 4.01. Total number of authors contributed in JISIS journal is 553, out of this single author contributed articles is 12 and multiple authors contributed articles is 541.

Table 2: JISIS Publications and Citations Outline

YEAR	NOP	TC	MTCPA=TC/NOP
2019	19	0	0
2020	25	34	1.36
2021	21	104	4.95
2022	36	264	7.33
2023	51	173	3.39

Here NOP, MTCPA and TC means No. of Publication, mean total citations per article and total citations. The publications and reference metrics from 2019 to 2024 has been given in above table. Furthermore, Table 2 also provides an explanation of the Mean TC per Article and Mean TC per Year. A journal's mean outcome is measured using the Mean TC per Article (MTCPA) statistic. The journal's MTCA performance turned out outstanding because of the information analysis. For evaluating a journal annual performance, the Mean Total Citation per Year (MTPY) is an important indicator. According to the outcome, 2022 has the greatest MTPY while comparing to all the years. General Over View of Citations shown in Table 3.

Table 3: General Over View of Citations

CITES DETAILS / YEAR	2019	2020	2021	2022	2023
Total Cites	0	34	101	261	170
Self-Cites	0	0	3	3	3
Cited documents	0	14	33	50	57
Uncited documents	0	5	11	15	25
External Cites per documents	0	1.78	2.22	3.96	2.03
Cites per documents	0	1.78	2.29	4.01	2.07
Citable documents	0	19	43	63	79
Non-Citable documents	0	0	1	2	3

According to JISIS's citation structure, the 130 publications had been cited 575 times in different research projects. Using citation counts as an index, 2022 had 264 citations from 36 documents, making it a notable month. Growth of the overall count of journal self-citations and citations that published papers in a journal received over the period of the five years previous. The overall count of references citations from one journal citing another, that are published in the same journal is known as journal self-citation. The proportion of a journal's content that has been cited at least once compared to its non-cited content in the following year, structured into a period of five years.

Evolution of the number of total citations per document and external citation per document (i.e., journal self-citations removed) received by a journal's published documents during the three previous years. The number of self-citations is reduced from overall count of citations the journal's publications have received in order to determine the number of external citations. Table displays the number of a journal's papers involving comprehensive studies (reviews, conference papers, and research publications) during five-decade intervals compared to those records beyond research papers, reviews, and proceedings from conferences. Not all articles in journal are accepted as major study and thus consider "citable."

3.2. International Collaboration

The publications that researchers from multiple countries have produced between 2019 and 2023 can be explained to international collaboration. The ratio of journal documents signed by researchers from multiple countries that is, addresses from multiple countries is displayed in a graph. International Collaboration from (2019-2023) shown in Figure 1.

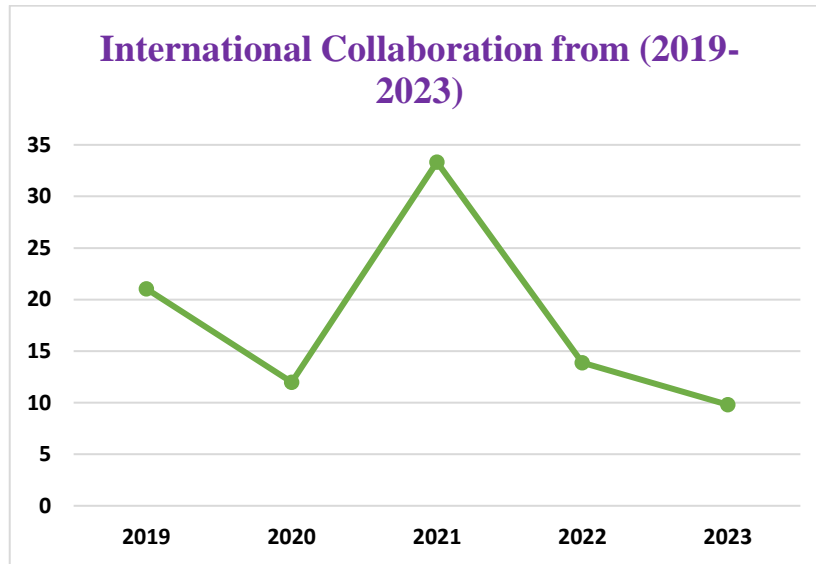


Figure 1: International Collaboration from (2019-2023)

3.3. SJR

According to their "average prestige per article," journals are ranked by the SJR, a size-independent prestige metric. The concept says, every reference material cannot be generated similarly that is core of it. SJR is a metric for measuring a journal's scientific impact that takes consideration of both the volume of citations the journal receives and the significance or rank of the publications that provide those citations. Table 4, shows the average count of SJR from the year 2020 to 2023. It expresses how important an average journal article is to the worldwide study of science and measures the average journal article's scientific contribution.

Table 4: SJR from 2019 to 2023

YEAR	SJR
2020	0.209
2021	0.342
2022	0.561
2023	0.350

3.4 Top Cited Article Journal Papers

From 2019 through 2024, the top 50 published papers in JISIS journal according to top citations are presented in Table 2. Computer networks, computer science, electrical engineering, computer science applications, information systems and software are just a few of the topics covered in this comprehensive guide on technology and Internet security protocols and challenges. Additionally, it covers the following topics: public key authentication; intrusion/virus/malware detection; content protection; key management, authentication, privacy, security, secrecy, and trust; and computer and network forensics. Requirements for security are also mentioned. Top 50 Cited Article from 2021 to 2024 shown in Table 5.

Table 5: Top 50 Cited Article from 2021 to 2024

REFERENCES	AUTHOR	CITESCORE	YEAR
[10]	(Sihag et al., 2021)	53	2021
[11]	(Lee et al., 2021)	34	2021
[12]	(Bae & Ha, 2021)	20	2021
[13]	(Kodric et al., 2021)	17	2021
[14]	(Johnson et al., 2021)	16	2021
[15]	(You et al., 2021)	10	2021
[16]	(Elshrkawey et al., 2021)	10	2021
[17]	(Verkholyak et al., 2021)	9	2021
[18]	(Culpa et al., 2021)	8	2021
[19]	(Buinevich et al., 2021)	7	2021
[20]	(Paul et al., 2021)	7	2021
[21]	(Narteni et al., 2021)	6	2021
[22]	(Ranieri et al., 2021)	5	2021
[23]	(Arfizurrahmanl et al., 2021)	5	2021
[24]	(Choudhary et al., 2022)	16	2022
[25]	(Ahmed et al., 2022)	13	2022
[26]	(Ndife et al., 2022)	12	2022
[27]	(Choi & Zhang, 2022)	9	2022
[28]	(Akin et al., 2022)	9	2022
[29]	(Sonya & Kavitha, 2022)	9	2022
[30]	(Yang et al., 2022)	9	2022
[31]	(Gyamfi et al., 2022)	8	2022
[32]	(Gali & Mahamkali, 2022)	8	2022
[33]	(Vijayan et al., 2022)	7	2022
[34]	(Pinto et al., 2022)	7	2022
[35]	(Hemasree & Kumar, 2022)	6	2022
[36]	(Kim et al., 2022)	6	2022
[37]	(Cabra et al., 2022)	5	2022
[38]	(Amiruzzaman et al., 2022)	5	2022
[39]	(Thevenon et al., 2022)	4	2022
[40]	(Lee et al., 2022)	4	2022
[41]	(Alamer et al., 2023)	26	2023
[42]	(Liloja and Ranjana, 2023)	18	2023
[43]	(Rahmawan et al., 2023)	10	2023
[44]	(Malathi et al., 2023)	10	2023
[45]	(Laith et al., 2023)	9	2023
[46]	(Sindhusaranya et al., 2023)	7	2023
[47]	(Obeidat & Yaqbeh, 2023)	7	2023
[48]	(Stephen et al., 2023)	7	2023
[49]	(Madhavi et al., 2023)	6	2023
[50]	(Salman & Banu, 2023)	6	2023
[51]	(Alamer & Shadadi, 2023)	6	2023
[52]	(Varshavardhini & Rajesh, 2023)	5	2023
[53]	(Alkishri et al., 2023)	5	2023
[54]	(Udayakumar et al., 2023)	5	2023
[55]	(Udayakumar et al., 2023)	4	2023
[56]	(Aswathy et al., 2023)	4	2023
[57]	(Jyothi et al., 2024)	8	2024
[58]	(Lavanya et al., 2024)	6	2024
[59]	(Rosa et al., 2024)	5	2024

3.5. Quartiles

The collection of journals has been separated into four equal categories, or four quartiles, based on their size-independent prestige indicator (SJR). Q1 (Orange) includes journals' quartiles with the greatest score of 40, Q2 (Yellow) the greatest score of 30, Q3 (Green) the greatest with the score of 20 and Q4 (Blue) the lowest score of 10. Comparing to all year 2020 has most varying quartiles for all the articles, for example the topics computer networks and communication, computer science, electrical and electronic engineering has the quartile (Q3). Likewise computer science applications, information systems and software has the quartile (Q4). In the year 2021 and 2023 all articles under the topics computer networks and communication, computer science(miscellaneous), electrical and electronic engineering computer science applications, information systems and software has maintained the same quartile (Q3). In 2022, all articles under the topics computer networks and communication, computer science(miscellaneous), electrical and electronic engineering computer science applications, information systems and software has maintained the same quartile (Q2), which highest maintained values comparing to all the quartiles. Year Wise Quartiles shown in Figure 2.

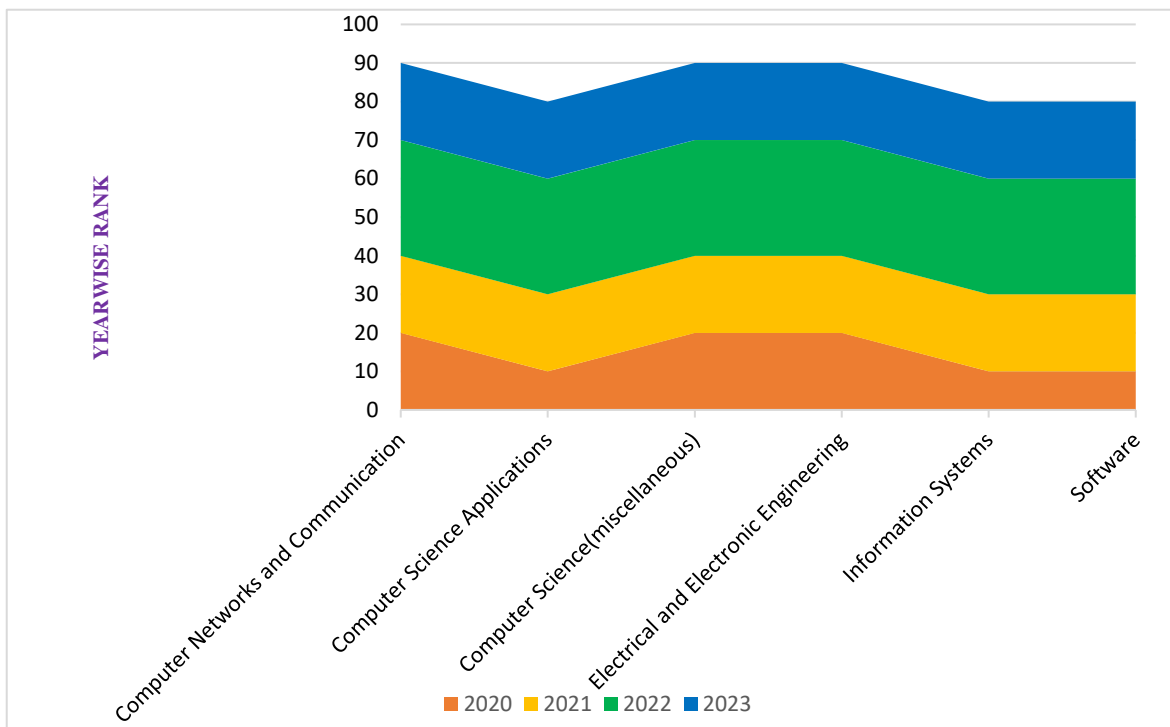


Figure 2: Year Wise Quartiles

4 Conclusion

The present research's objective was evaluation and representation of the JISIS's study's outcomes. Using bibliometric measures, this study offers a complete overview of all the papers published from the year 2019 and 2024. The Scopus database was the source of the information. A bibliometric performance output is presented in this study based on factors like top-cited papers, structure of documents and citations, many popular authors, and stream of information in JISIS. Present study has employed thematic and collaboration analyses to provide a greater understanding of the logical and social structures inside JISIS.

After analysing 130 JISIS publications published between 2019 and 2023, a number of findings are provided based on several bibliometric indexes. Our first study goal was to examine the publication trends and citations of the JISIS during the previous five years. The publication has observed a considerable growth in total number of articles, according to the record the journal had published just 19 articles in 2019 and 51 articles published in 2023 mentioned in table 2. Considering 83% of total papers analysed contained citations, the results showed that JISIS is a premier publication for research. The effect of such a famous journal has also been strengthened by the inclusion of numerous authors' works in it.

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