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Research Article

Scientometric Portrait of Nobel Laureate John F Clauser

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ABSTRACT

American experimental physicist John Francis Clauser is renowned for his contributions to the foundations of quantum mechanics, in particular the Clauser-Horne-Shimony-Holt inequality. Along with Alain Aspect and Anton Zeilinger, John F Clauser received the Physics Nobel Prize in 2022 "for experiments with entangled photons, establishing the violation of Bell inequalities, and pioneering quantum information science". The current study's goal was to look into and evaluate various facets of the research publications of Nobel Prize-winning scientist John F. Clauser. Fundamental Scientometric criteria, such as publication growth patterns, authorship status, most active collaborators, and core journals preferred for publications, were used to evaluate his publications. The Dimensions AI database was used to analyse the publications and citations of the data. Between 1966 and 2023, the John Francis Clauser bibliographic analysis turned up 55 articles. This study looks at a number of factors, including citation, document type, author models, core journals preferred for publications, etc.

Keywords: Scientometric Portrait, Bio bibliometric, Publication productivity, Citations, Scientist, John Francis Clauser, Nobel Prize.

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INTRODUCTION

John F. Clauser, an American physicist, was born in Pasadena, California, on December 1, 1942. He won the 2022 Nobel Prize in Physics for his research on quantum entanglement. He shared the honor with Austrian physicist Anton Zeilinger and French physicist Alain Aspect (Encyclopedia Britannica, 2022, https://www.johnclauser.com/, accessed on 04/10/2022). Francis H. Clauser, his father, was a professor of aeronautical engineering who established and oversaw the Department of Aeronautics at Johns Hopkins University. Later, he worked as the Clark Blanchard Millikan Professor of Engineering at the California Institute of Technology (Caltech). His mother, Catharine McMillan, was the humanities librarian at Caltech and sister of 1951 Nobel Prize in Chemistry laureate Edwin McMillan (Caltech, 2022).

Clauser graduated from the California Institute of Technology in 1964 with Abachelor's degree Inphysics. He continued his study of physics at Columbia University, where he earned Amaster's degree in 1966 and a doctorate in 1969. He held postdoctoral positions from 1969 to 1975 at the University of California, Berkeley, and the Lawrence Berkeley National Laboratory, before serving as a research physicist at Lawrence Livermore National Laboratory until 1986 (Encyclopedia Britannica, 2022). In 1972, working with Berkeley graduate student Stuart Freedman, he carried out the first experimental test of the CHSH-Bell's theorem predictions. This was the first experimental observation of a violation of a Bell inequality (American Institute of Physics, 2022; Wikipedia, 2022; Freedman & Clauser, 1972). In 1974, working with Michael Horne, he first showed that a generalization of Bell's Theorem provides severe constraints for all local realistic theories of nature (a.k.a. objective local theories). That work introduced the Clauser-Horne (CH) inequality as the first fully general experimental requirement set by local realism. It also introduced the "CH no-enhancement assumption", whereupon the CH inequality reduces to the CHSH inequality, and where upon associated experimental tests also constrain local realism. Also in 1974 he made the first observation of sub-Poissonian statistics for light (via a violation of the Cauchy-Schwarz inequality for classical electromagnetic fields), and thereby, for the first time, demonstrated an unambiguous particle-like character for photons (Wikipedia contributors, 2022; Encyclopedia Britannica, 2022).

During the late 1980s Clauser worked in the private sector as a senior scientist at Science Applications International Corporation (SAIC) and as a private consultant and inventor. In 1990 he joined the physics faculty of the University of California, Berkeley, as a research scientist. Since 1997 he has been self-employed as a private consultant (Encyclopedia Britannica, 2022; Wikipedia, 2022).

Clauser worked as a research physicist mainly at Lawrence Livermore and Berkeley from 1975 to 1997. In 1976 he carried out the world's second experimental test of the CHSH-Bell's Theorem

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predictions. Clauser was awarded the Wolf Prize in Physics in 2010 together with Alain Aspect and Anton Zeilinger (California Institute of Technology, 2022; Encyclopedia Britannica, 2022, NobelPrize.org accessed on 04/10/2022). As of September 2023, Clauser has an *h*-index of 31 according to Google Scholar and of 22 according toScopus.

Awards and Honours

John F. Clauser is a highly respected scientist who has made significant contributions to the foundations of quantum mechanics, in particular for the Clauser-Horne-Shimony-Holt (CHSH) inequality, for the first experimental proof that non-local quantum entanglement is real (Freedman-Clauser), and for the formulation of the theory of Local Realism (Clauser-Horne) (Encyclopedia Britannica, 2022; Wikipedia contributors, 2022). He was awarded Reality Foundation Prize in 1982 shared with John Bell, and He awarded 2010 Wolf Prize in physics shared with Alain Aspect (France) and Anton Zeilinger (Austria). He was awarded the 2011 Thompson-Reuters Citation Laureate in Physics for his work "For his tests of Bell's inequalities and his research in quantum entanglement." Along with Alain Aspect and Anton Zeilinger, Clauser received the Physics Nobel Prize in 2022 "for experiments with entangled photons, establishing the violation of Bell inequalities and pioneering quantum information science" (Wikipedia, 2022).

Objectives of the study

Following are the objectives of the study.

- Year-wise number of Publications by John F. Clauser with Citations.
- To know the Document-wise Distribution of Publications.
- To identify the Quinquennium-wise Publications.
- To identify the Prominent Collaborators.
- Source-wise Distribution of Publications with citations.
- Collaborative Author-wise Distribution of Publications.
- Authorship position of John F. Clauser.
- Organization wise Distribution of Publications with citations.
- Highly Cited Papers from Nobel laureate John F. Clauser.
- Citation analysis of various database indexed research papers of John F. Clauser.

Review of literature

In recent years, some authors have focused on the scientometric representations of some individual public and global creators in various logical disciplines. A few investigations are, Sangam *et al.* (2007) studied out the Communication and collaborative research pattern of Sivaraj Ramaseshan: A scientometric portrait. Based on a study of 178 articles published by S. Ramaseshan between 1944 and 2000. He has worked with 47 renowned scientists and students during the course of his scientific career. He has a wide range of interests, which can be grouped into four primary categories: crystallographic research, magneto-optics and optics, solid state physics, and other topics. Garg and Kumar (2019) studied out the Scientometric Portrait of Hari Chand Sharma: A Renowned Agricultural Scientist. Based on a study of 269 articles published by Dr. H. C. Sharma between 1976 and 2016, he co-authored almost all the articles except 11 articles as a single author. This is also indicated by the high value of the cooperation coefficient, which is 0.66, and the degree of cooperation. He was most productive during the age of 58-60 year. The high value of citations per paper indicated that the research outputs of Dr. Sharma were part of the main stream science.

Jalal (2020) studied out Scientometric portrait of Professor CNR Rao using bibliometrix package. The review uncovers that in his 85 years of life and exploration encounters, he distributed 1648 articles, which are ordered in Scopus data set during 1956-2019 with normal reference for every paper is 52.01. A collaboration co-authorship and co-occurrences networks of the author were built using Bibliometrix R Package. Author co-citation network, co-authorship and authors' coupling were built using R Package. The significant discoveries of the review show that the most elevated cooperation occurred with the France, Canada and Japan. The major findings of the study show that the highest collaboration happened with the USA, UK, France, Canada and Japan. The result show that he collaborated with 1156 unique authors from various countries with co-authors per document is 3.81 and collaborative index is 0.73. Rao is having 1, 19,169 reference from Google scholar with h-index (156) and i-10 index (1325). Gholampour and Noruzi (2021) studied out the Scientometric portrait of Professor Wolfgang Glänzel. Study found that during his 37 years of scientific career, 276 articles have been individually or collaboratively indexed with his name in Web of Science. Thirty five out of 276 papers were single authored by Glänzel, and the other 241 ones were collaborative works. Glänzel's highest level of scientific productivity with 122 documents was during the years 2008 to 2017, when he was 53 to 62 years old. Scientometric was his preferred journal. Glänzel has mainly collaborated with researchers from Hungary and Belgium, specifically some of the KU Leuven and the Hungarian Academy of Sciences.

Das and Sahu (2021) studied out the Scientometric Portrait of Stephen Hawking-the British Physicist and Cosmologist. Study found that the Large-Scale Structure of Space-Time (12073) is the highest cited work, L. Mlodinow is the top co-author and favored language in most cases is English. The maximum numbers of publications were contributed in the year 1996, followed by the

years 2002, 2010 and 2015. Physical Review D (44) and American Physical Society (51) are the core journal and publisher. From the years 1965 to 2018 single authored papers are pre-dominant. High value of total citation shows the tremendous influence of his research works and the value of *h*-index and 1-10 index also shows the high productivity of the scientist. Prof. Sunilkumar S. Manvi will be highlighted in the study by Vasantha and Sangeetha (2023) since he has 292 publications over the course of 24 productive years (1999-2022), with 33 of those papers coming out in 2011. During the research period of 1999-2022, his publications were examined for document types, year-by-year distribution, distribution of articles in various fields, productivity of citations, authorship patterns, measures of collaborations, collaboration indices, most prolific journals with number of publications, highly cited articles, and citations.

Mahemei (2023) carried out the Scientometric Portrait of Mathematician Prof. Govindan Rangarajan. The study analyses the research publications indexed in the Scopus database during 1989-2022 He published 92 research papers and received 2618 citations. His *h*-index is 25. His 85 research publications were multi-authored indicating a high degree of research collaboration. "Physical Review E-Statistical, Non-linear, and Soft Matter Physics" was the most preferred journal for publishing the research findings. One of his research articles published in "Physics Letters, Section A: General, Atomic and Solid-State Physics" with an

Table 1: Year-wise number of Publications by Nobel laureate John F. Clauser with Citations.

Year	No. of Publication	Citation	Year	No. of Publication	Citations
1966	1	10	1995	1	148
1967	0	14	1996	1	127
1968	1	11	1997	1	128
1969	3	18	1998	0	83
1970	1	14	1999	0	122
1971	2	20	2000	0	125
1972	3	21	2001	0	148
1973	3	23	2002	2	220
1974	2	23	2003	1	188
1975	0	32	2004	0	184
1976	3	50	2005	0	236
1977	0	67	2006	0	245
1978	1	46	2007	0	246
1979	1	38	2008	1	266
1980	2	78	2009	0	321
1981	1	69	2010	0	305
1982	2	100	2011	0	352
1983	5	144	2012	0	357
1984	2	102	2013	0	359
1985	2	129	2014	0	425
1986	0	104	2015	0	441
1987	0	97	2016	1	499
1988	1	162	2017	0	426
1989	0	118	2018	0	422
1990	3	102	2019	0	435
1991	0	83	2020	0	476
1992	2	90	2021	1	477
1993	0	90	2022	0	516
1994	5	104	2023	0	389
			Total	55	10625

impact factor of 2.707 received 290 citations. Noruzi *et al.*, (2023) carried out the scientometric analysis of Professor Henri Dou, a Pioneer of Competitive Intelligence in France. Scientometric analysis of all documents published by Professor Henri Dou and indexed in the Scopus database. Study found that during his scientific career, he has been able to collaborate with researchers from 11 countries, which shows his attention to the issue of science diplomacy. In addition to international collaborations, this distinguished professor has paid special attention to national collaboration and intra-organizational collaboration, so most of his scientific activities have been with French researchers and researchers at Aix-Marseille University. The subject areas of innovation, competitive intelligence, and invention analysis have been among the topics of interest of this distinguished professor.

DATA SOURCE AND RESEARCH METHODOLOGY

The Dimensions AI database, which Digital Science and more than 100 reputable academic organizations globally produced, was used to collect the study's data. Information was gathered between September 2 and September 8, 2023. The database's search feature was used to conduct a researcher name search, using terms like "John F. Clauser." The search yielded a total of 55 results, which were saved in a CSV file and opened in MS-Excel for additional analysis and interpretation in the form of applicable tables and graphs. 55 titles produced between 1966 and 2023 were uncovered through bibliometric analysis of the John F. Clauser. Additionally, the report is compiled for more in-depth analysis. Data analysis and result presenting were both included in this study. VOSviewer is a free tool that displays bibliographic maps based on input data, helping you visualize data in different bibliographic networks. This study examines citations, document types, authorship models, distribution of contributors by country, and more (Angadi *et al.*, 2006.; Das & Sahu., 2021.; Vasserman, 2023).

RESULTS AND ANALYSIS

Year-wise number of Publications by Nobel laureate John F. Clauser with Citations

Table 1, Figures 1 and 3 display the 55 articles that John F. Clauser authored between 1966 and 2023. The maximum number of articles, five, was published in 1983 and 1994. The fewest articles were published in 1966, 1968, 1970, 1978, 1979, 1981, and 1988.

1995, 1996, 1997, 2003, 2008, 2016, and 2021, when there were only 1. The most citations discovered in 2022 were 516. The smallest total of citations was 10 in 1966.

Document-wise Distribution of Publications

John F. Clauser employed a variety of document kinds to disseminate his articles, as seen in Table 2 and Figure 2. As can be seen, journal articles-with more than 43 (78.181%) publications-are the most popular type of document, followed by chapters with 9 (16.363%), Proceeding with 2 (3.636%), and papers from Preprint with 1 (1.820%). We can see that John F. Clauser prefers journals as his primary form of communication.

Quinquennial-wise publication

Table 3 lists and describes the five-year publication period that John F. Clauser used to publish his publications. Table 3 shows that the five-year productivity peak was from 1981 to 1985, when the author published a total of 12 papers, followed by 10 papers in 1971-1975 and 8 in 1991-1995.

Prominent Collaborators

Table 4 contains a list of notable authors who collaborated on John F. Clauser's 55 journal articles. W. E. Nexsen was the most prominent contributor, with John F. Clauser he contributed 12 journal articles and 473 citations, followed by Thomas C. with 12 journal articles and 473 citations. and F H Coensgen and Robert S Hornady with 11 and 8 journal articles respectively with 463 and 320 citations .

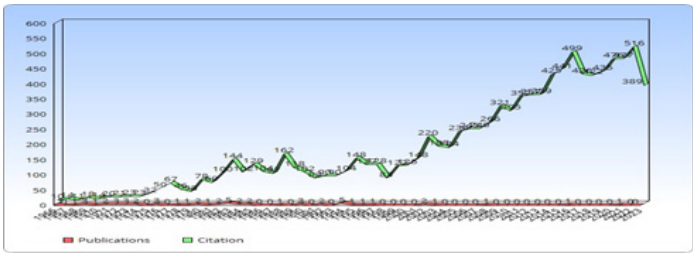

Figure 1: Year-wise number of Publications and Citations Souce: ChartGo.

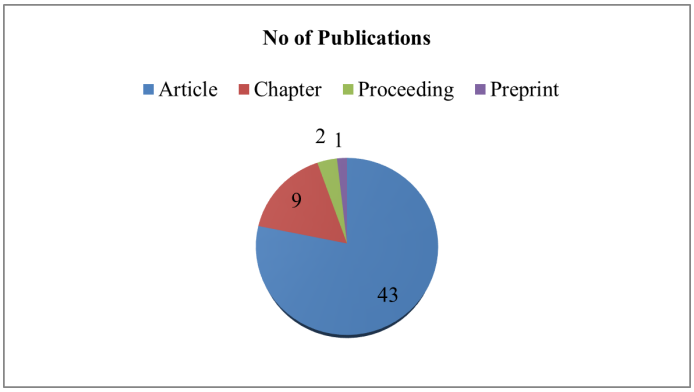

Figure 2: Document-wise Distribution of Publications.

Table 2: Document-wise Distribution of Publications.

Sl. No.	Form of Publications	No of Publications	Percentage
1	Article	43	78.181
2	Chapter	9	16.363
3	Proceeding	2	3.636
4	Preprint	1	1.820
	Total	55	100%

Source-wise Distribution of Publications with citations

The 55 articles published in various journals are shown in Table 5 and Figure 4. John F. Clauser has contributed maximum 12 articles in the Physical Review Letters which have received 7255 citations. In Physical Review A Journal, 5 articles were recorded with 298 citations and in Nuclear Fusion, 4 articles are recorded with 141 citations and followed by The Physics of Fluids, 3 articles with 41 citations.

Collaborative Author-wise Distribution of Publications

Table 6 shows the detailed authorship pattern of John F. Clauser's 55 journal articles. It turned out that only 22 articles are from one author. And 33 articles are co-authored by different authors. The table shows that John F. Clauser has more collaborations with two authors (13), followed by three authors (5); four authors (2) and twenty-four and twenty-eight authors contributed to (2) publications.

John F. Clauser's authorship position

Table 7 shows the position of John F. Clauser among the authors of all his papers. Out of 55 articles, he was first or main author in 34 articles, second in 10, third in 2, fourth in 7, and 1 article ranked sixth and seventh.

Organization wise Distribution of Publications with citations

Table 8 and Figure 5 indicate the most frequent partner organizations as well as the organizational collaboration network created or collaborated by John F. Clauser. Institutions collaboration for at least 1 document has been presented. The University of California, Berkeley with (n=21) distributions with 3235 references and trailed by lawrence livermore national laboratory (n=15) with 1632 citations.

Table 3: Quinquennial-wise publication.

Sl. No.	Year	Number of Publications	Cumulative No. of Publications
1	1966-1970	6	6
2	1971-1975	10	16
3	1976-1980	7	23
4	1981-1985	12	35
5	1986-1990	4	39
6	1991-1995	8	47
7	1996-2000	2	49
8	2001-2005	3	52
9	2006-2010	1	53
10	2011-2015	0	53
11	2016-2020	1	54
12	2021-Cont	1	55
	Total	55	

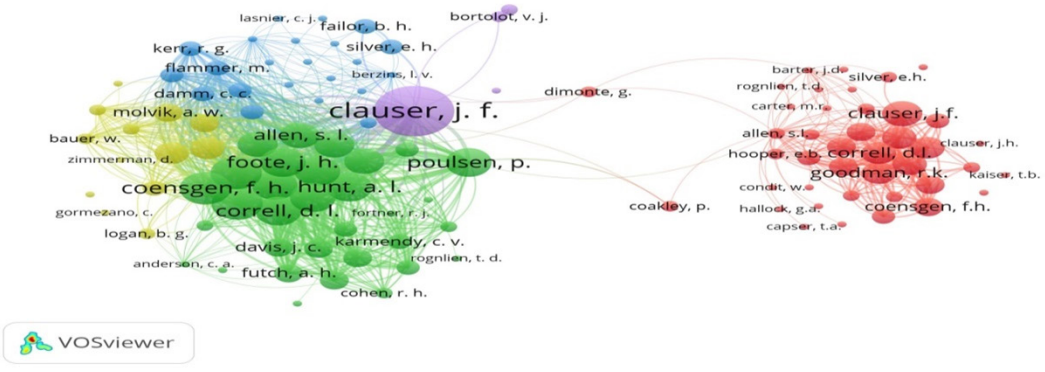

Figure 3: Co-Authorship wise Visualisations network map.

Table 4: Prominent Collaborators.

Sl. No.	Co-Author's name	Organization, Country	No. of papers contributed with Svante Pääbo	Citations	Citations Mean
1	W E Nexsen	Lawrence Livermore National Laboratory, United States.	12	473	39.42
2	Thomas C Simonen	Lawrence Livermore National Laboratory, United States.	12	473	39.42
3	F H Coensgen	Lawrence Livermore National Laboratory, United States.	11	463	42.09
4	Robert S Hornady	Lawrence Livermore National Laboratory, United States.	8	320	40
5	Archer H Futch	Lawrence Livermore National Laboratory, United States.	8	234	29.25
6	Thomas A Casper	Woodruff Scientific (United States), United States.	6	302	50.33
7	B W Stallard	Lawrence Livermore National Laboratory, United States.	6	253	42.17
8	D L Correll	Lawrence Livermore National Laboratory, United States.	6	243	40.5
9	R K Goodman	Lawrence Livermore National Laboratory, United States.	6	243	40.5
10	W F Cummins	Lawrence Livermore National Laboratory, United States.	5	243	48.6
11	Arthur W Molvik	Lawrence Livermore National Laboratory, United States.	5	228	45.6
12	Richard P Drake	University of Michigan-Ann Arbor, United States.	5	212	42.4
13	James H Foote	Lawrence Livermore National Laboratory, United States.	5	187	37.4
14	D P Grubb	Lawrence Livermore National Laboratory, United States.	5	187	37.4
15	Shifang Li	University of California, Berkeley, United States.	5	178	35.6
16	W C Turner	University of California, Berkeley, United States	4	134	33.5
17	C V Karmendy	Lawrence Livermore National Laboratory, United States.	4	76	19
18	Abner Shimony	Boston University, United States.	3	6,569	2189.67
19	Michael A Horne	Stonehill College, United States.	3	6,486	2162
20	Angus L Hunt	Lawrence Livermore National Laboratory, United States.	3	183	61

Highly Cited Papers from Nobel laureate John F. Clauser

A list of John F. Clauser's 20 most cited papers is shown in Table 9 and Figure 6. These papers have been cited at least 5,300 times since publication. Proposed Experiment to Test Local Hidden-Variable Theories published in 1969 with 5363 citations, followed by Experimental Test of Local Hidden-Variable Theories published in 1972 with 1201 citations and Bell's theorem. Experimental tests and implications published in 1978 with 1159 citations.

From Table 10 it is found that Google scholar received a total number of 19512 citations for 122 publication and *h*-index as 31, i10-index is 40. Scopus received a total no of 9971 citations for 39

Table 5: **Source-wise Distribution of Publications with citations.**

Title of the journal	No. of papers	Citations	Citations Mean
Physical Review Letters	12	7255	604.58
Physical Review A	5	298	59.6
Nuclear Fusion	4	141	35.25
The Physics of Fluids	3	41	13.67
American Journal of Physics	2	29	14.5
Coherence and Quantum Optics	2	6	3
Fundamental Theories of Physics	2	0	-
Physical Review D	2	1367	683.5
Review of Scientific Instruments	2	0	-
Applied Physics B	1	83	83
Art Journal	1	0	-
arXiv	1	0	-
Atom Interferometry	1	11	11
Coherence and Quantum Optics VIII	1	4	4
Concepts of Quantum Optics	1	0	-
Foundations of Quantum Mechanics	1	1	1
IEEE Transactions on Plasma Science	1	10	10
Il Nuovo Cimento B (1971-1996)	1	44	44
International Astronomical Union Colloquium	1	0	-
Journal of Rheology	1	16	16
Physica B+C	1	135	135
Proceedings of SPIE	1	0	-
Quantum [Un]speakables	1	22	22
Reports on Progress in Physics	1	1159	1159
Science	1	0	-
The Drama Review TDR	1	0	-
The Frontiers Collection	1	3	3
others	3	0	-
Total	55	10625	

publications and *h*-index is 22. Dimensions received a total no of 10625 citations for 55 publications. ReserachGate received a total no of 13635 citations for 79 publications and *h*-index is 24.

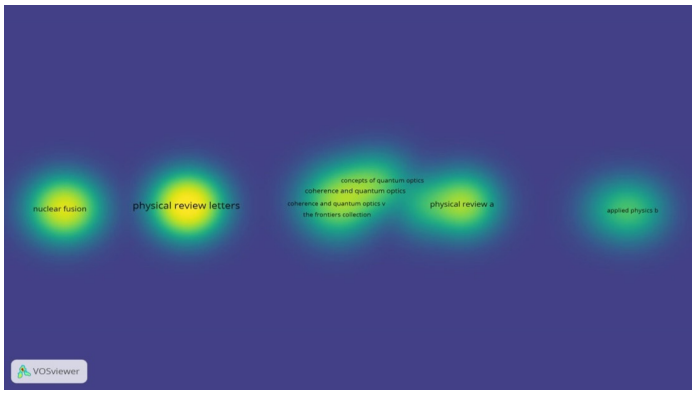

Figure 4: Source-wise Distribution of Publications.

DISCUSSION AND CONCLUSION

The qualitative features of research communication are examined in John F. Clauser's 55 publications published in various journals. At the age of 24, John F. Clauser published his first journal article in 1966. From 1966 until 2023; John F. Clauser published 55 publications. The most articles, five, were published between 1983 and 1994. The lowest number of articles published was one in 1966, 1968, 1970, 1978, 1979, 1981, 1988, 1995, 1996, 1997,

Table 6: Collaborative Author-wise Distribution of Publications.

No. of Authors	Total papers	(Percent)	Total Authors	(Percent)
1-Author	22	40	22	0.599
2-Authors	13	23.63	26	1.557
3-Authors	5	9.1	15	2.06
4-Authors	2	3.63	8	4.03
11- Authors	1	1.82	11	3.526
13-Authors	1	1.82	13	3.869
14-Authors	1	1.82	14	2.244
15-Authors	1	1.82	15	7.556
23-Authors	1	1.82	23	0.526
24-Authors	2	3.63	48	1.099
26-Authors	1	1.82	26	0.595
28-Authors	2	3.63	56	1.282
30-Authors	1	1.82	30	1.373
31-Authors	1	1.82	31	2.129
43-Authors	1	1.82	43	3.503
Total	55	100%	381	100%

Table 7: John F. Clauser's authorship position.

	Position of John F. Clauser's								
Publication	1	2	3	4	5	6	7	8	Total
Single Authored	22								22
2-Authors	10	3							13
3- Authors		4	1						5
4- Authors	2								2
11- Authors		1							1
13- Authors		1							1
14- Authors		1							1
15- Authors			1						1
23- Authors				1					1
24- Authors						1	1		2
26- Authors				1					1
28- Authors				2					2
30- Authors				1					1
31- Authors				1					1
43- Authors				1					1
Total	34	10	2	7	-	1	1	-	55

2003, 2008, 2016, and 2021. The most citations discovered in 2022 were 516. The lowest number of citations was ten in 1966.

Out of the 55 publications overall Research articles make up the majority of the contributions (43), followed by chapters (9), proceeding with (2), and preprint (1). His most productive quinquennium was 1981-1985, when he submitted 12 articles, followed by 10 articles in 1971-1975 and 8 articles in 1991-1995. The most notable collaborator is W E Nexsen, with whom he has authored 12 papers, followed by Thomas C Simonen (12 papers), F H Coensgen (11) and Robert S Hornady (8 papers). He has also worked on 8 papers with Archer H Futch and Robert S Hornady. Maximum 12 articles by John F. Clauser have been

Table 8: **Organization wise Distribution of Publications with citation citations.**

Organization	No. of papers	Citations	Total link strength
University of California, Berkeley.	21	3235	1
Lawrence Livermore National Laboratory.	15	1632	12
Johns Hopkins University.	5	185	12
Columbia University.	3	5519	4
Goddard Institute for Space Studies.	2	156	2
Rensselaer Polytechnic Institute.	2	12	5
Sandia National Laboratories California.	2	144	6
Boston University.	1	5363	2
California Institute of Technology.	1	16	0
Harvard University.	1	5363	2
Stonehill College.	1	1076	1
University of California System.	1	0	0
University of California, Davis.	1	86	4
University of Iowa.	1	6	3
University of Maryland, College Park.	1	86	4

Table 9: **Highly Cited Papers from Nobel laureate John F. Clauser.**

Sl. No.	Title	Journal Name	Citation	Year
1	Proposed Experiment to Test Local Hidden-Variable Theories	Physical Review Letters 23(15), 880-884	5363	1969
2	Experimental Test of Local Hidden-Variable Theories	Physical Review Letters 28(14), 938-941	1201	1972
3	Bell's theorem. Experimental tests and implications	Reports on Progress in Physics 41(12), 1881	1159	1978
4	Experimental consequences of objective local theories	Physical Review D 10(2), 526-535	1076	1974
5	Experimental distinction between the quantum and classical field-theoretic predictions for the photoelectric effect	Physical Review D 9(4), 853-860	291	1974
6	Experimental Investigation of a Polarization Correlation Anomaly	Physical Review Letters 36(21), 1223-1226	195	1976
7	Talbot-vonLau atom interferometry with cold slow potassium	Physical Review A 49(4), r2213-r2216	138	1994
8	Ultra-high sensitivity accelerometers and gyroscopes using neutral atom matter-wave interferometry	Physica B+C 151(2), 262-272	135	1988
9	Cosmic Microwave Radiation at 2.63 mm from Observations of Interstellar CN	Physical Review Letters 16(18), 819-822	105	1966
10	Electrostatic Plasma-Confinement Experiments in a Tandem Mirror System	Physical Review Letters 44(17), 1132-1135	98	1980
11	Thermal-Barrier Production and Identification in a Tandem Mirror	Physical Review Letters 53(8), 783-786	86	1984
12	New theoretical and experimental results in fresnel optics with applications to matter-wave and X-ray interferometry	Applied Physics B 54(5), 380-395	83	1992
13	Experimental Limitations to the Validity of Semiclassical Radiation Theories	Physical Review A 6(1), 49-54	71	1972
14	Factoring integers with Youngâ€™s N-slit interferometer	Physical Review A 53(6), 4587-4590	59	1996

Sl. No.	Title	Journal Name	Citation	Year
15	Operation of the Tandem-Mirror Plasma Experiment with Skew Neutral-Beam Injection	Physical Review Letters 50(21), 1668-1671	58	1983
16	Field-reversal experiments in a neutral-beam-injected mirror machine	Nuclear Fusion 19(8), 1011-1028	56	1979
17	Proposed Experiment to Test Local Hidden Variable Theories.	Physical Review Letters 24(10), 549-549	56	1970
18	Upper Limits to the Intensity of Background Radiation at Î»=1.32, 0.559, AND 0.359 mm	Physical Review Letters 22(7), 307-310	51	1969
19	Measurement of the circular-polarization correlation in photons from an atomic cascade	Il Nuovo Cimento B (1971-1996) 33(2), 740-746	44	1976
20	High-Î², Gas-Stabilized, Mirror-Confined Plasma	Physical Review Letters 37(22), 1468-1471	39	1976

Table 10: **Citation analysis of various database indexed research papers of Nobel laureate John F. Clauser.**

Sl. No.	Database	Documents	Citation	*h*-index	i 10-index
1	Google Scholar	122	19512	31	40
2	Scopus	39	9971	22	-
3	Dimensions	55	10625	-	-
4	ReserachGate	79	13635	24	-

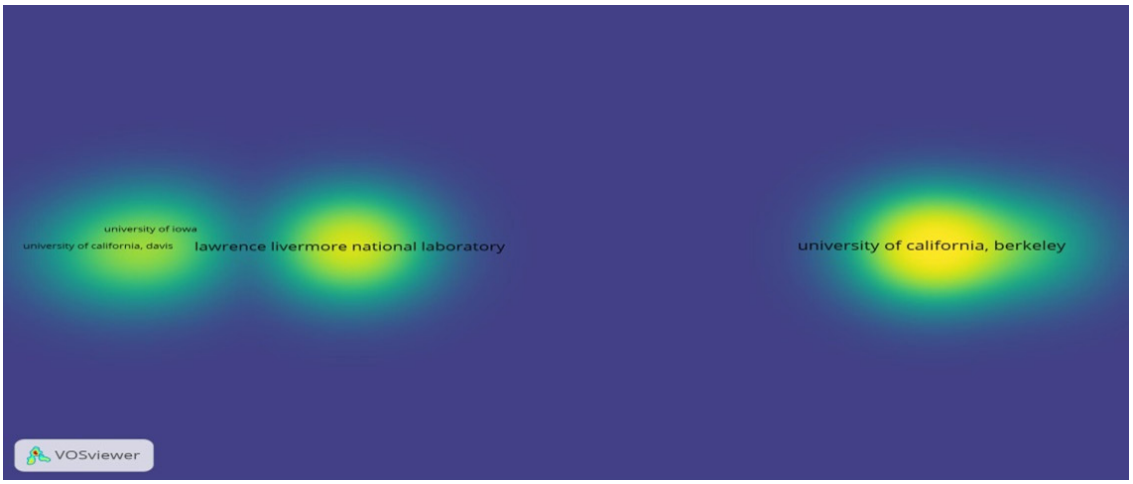

Figure 5: Organization wise Distribution of Publications.

published in Physical Review Letters, which has received 7255 citations. Physical Review A Journal was next, with 5 articles and 298 citations.

33 of the 55 total publications were co-authored by two or more authors, while 22 of the papers were produced by a single author. John F. Clauser has published more works in collaboration with two authors (13) than with three authors (5) or four authors (2). Out of 55 papers, he was the first or primary author of 34, second in 10, third in 2, fourth in 7, sixth in 1, and seventh in 1.

Proposed Experiment to Test Local Hidden-Variable Theories from 1969, with 5363 citations, is the most highly cited article, followed by Experimental Test of Local Hidden-Variable Theories from 1972, with 1201 citations. Important details regarding John F. Clauser, such as the total number of articles, Citations, and *h*-index, were also provided by the results. Google Scholar recorded 19512 citations to 122 papers with a 31 *h*-index and a 40 i10-index, whereas Scopus recorded 9971 citations overall for 22 publications with a 22 *h*-index. For its 55 publications, Dimensions acquired a total of 10625 citations. For 79 papers,

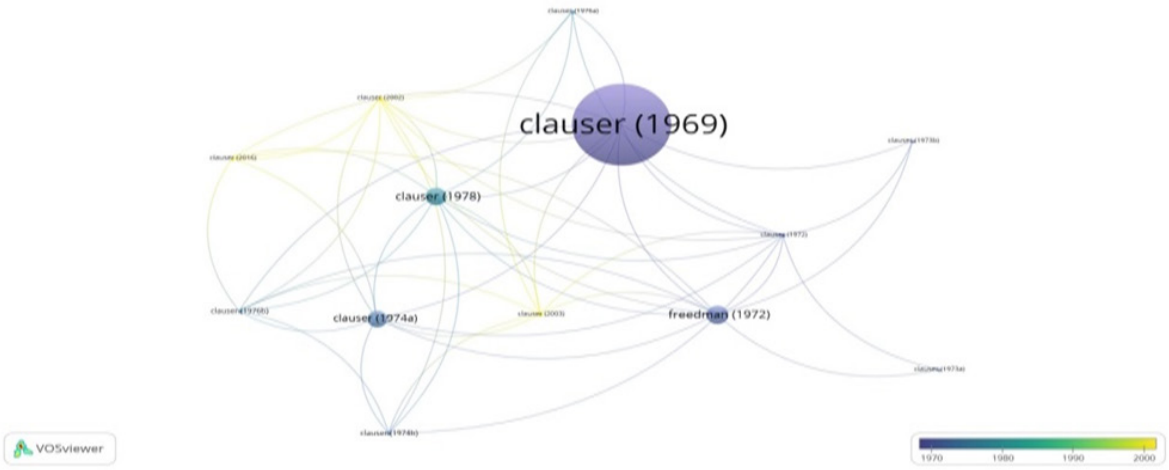

Figure 6: Highly Cited Papers from Nobel laureate John F. Clauser.

ResearchGate received a total of 13635 citations, and the *h*-index is 24.

He has received several awards and honors to his credit in recognition of his significant contributions including the Nobel Prize in the Physics for "for experiments with entangled photons, establishing the violation ofBell inequalities and pioneering quantum information science" Along with Alain Aspect and Anton Zeilinger in 2022.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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