Publication Report

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Report Generated on April 24, 2024

1 Data Quality

This section gives an overall overview of the works covered by the survey. We first look at all works, and consider which entries cannot be full analyzed. We consider the following status outcomes: no DOI, the bib entry does not give a DOI, this typically means that we cannot find the citation and reference counts for the work. A special case is the Thesis type, which do not have a DOI assigned by the university. Even entries with a DOI may not be covered, we distinguish entries that are covered by neither Crossref nor Scopus, or entries which are covered by one, but not the other. THE OK status indicates that we can find the entry in all our sources.

Note that OpenCitations does not distinguish between a DOI that is not covered, and a DOI for which there are no references or citations. In both cases, an empty list is returned by the query.

We may be able to repair some of the entries by finding a DOI for entries which miss them, or by correcting a mistake in a DOI, where neither Crossref nor Scopus recognizes the entry. Not that the system responses are cached, and missing entries are not repeatedly queried by the system. This means that additions or corrections in the databases that occur after we first queried them for a specific entry are not automatically taken into account. It may be good practice to re-run all queries from time to time to reflect updates in the databases.

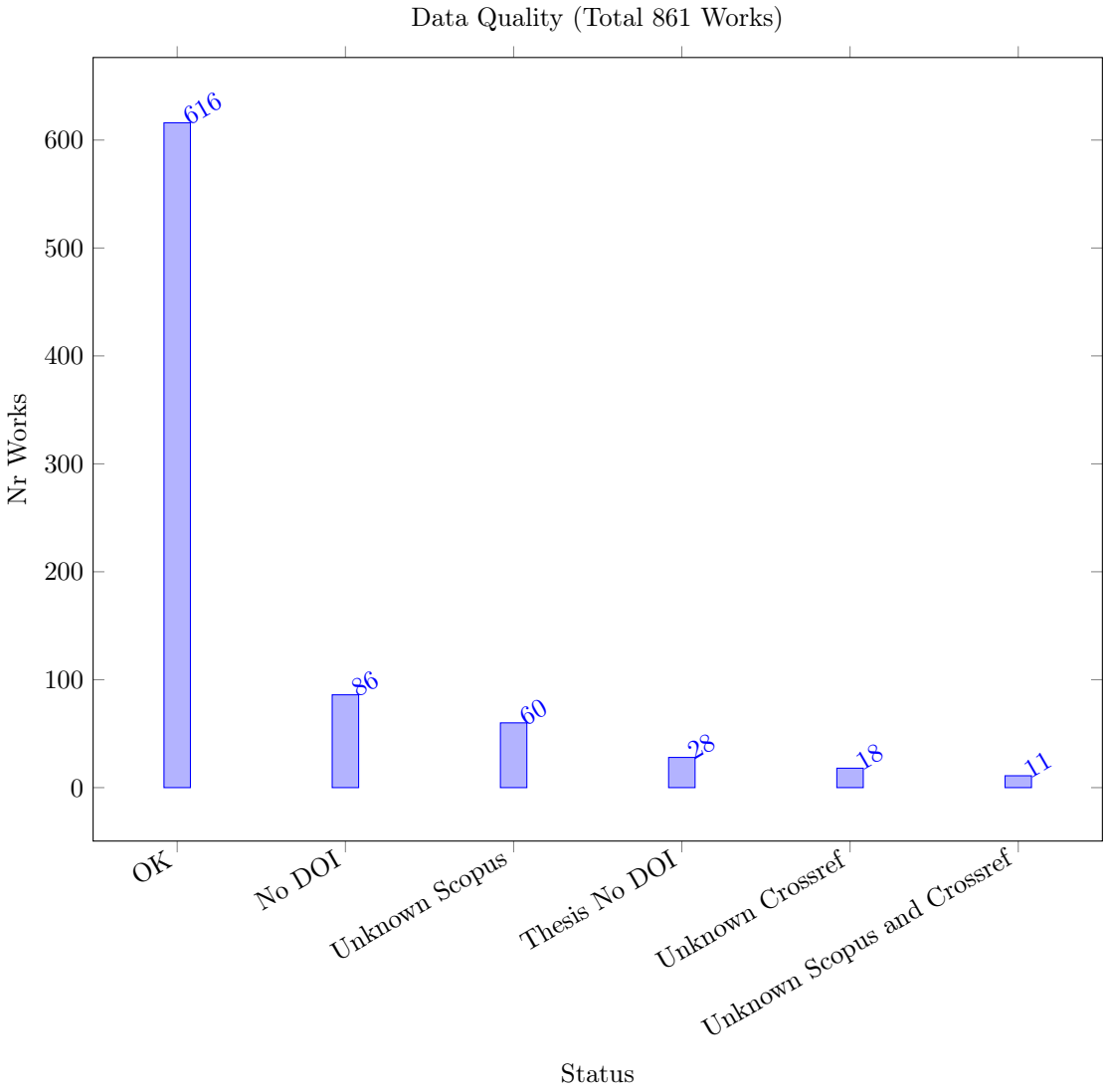

Data Quality (Total 861 Works)
Nr Works
0
100
200
300
400
500
600
616
86
60
28
18
11
OK
No DOI
Unknown Scopus
Thesis No DOI
Unknown Crossref
Unknown Scopus and Crossref
Status

Table 1: Works Unknown to Crossref and Scopus

Key	DOI	Source Group	Year	Nr Citations	Crossref Citations	Scopus Citations	Range Citations	Range Percentage
abs-2402-00459	10.48550/arxiv.2402.00459	Preprint	2024	0	0	0	0	NaN
abs-2305-19888	10.48550/arxiv.2305.19888	Preprint	2023	0	0	0	0	NaN
abs-2306-05747	10.48550/arxiv.2306.05747	Preprint	2023	0	0	0	0	NaN
abs-2312-13682	10.48550/arxiv.2312.13682	Preprint	2023	0	0	0	0	NaN
GokPTGO23	10.1007/s10479-022-04547-	ORJournal	2023	0	0	0	0	NaN
abs-2211-14492	10.48550/arxiv.2211.14492	Preprint	2022	0	0	0	0	NaN
OrnekOS20	10.1007/s12351-020-00563-	ORJournal	2022	0	0	0	0	NaN
OrnekO16	10.23055/ijietap.2016.23.1.1930	OtherJournal	2016	0	0	0	0	NaN
AronssonBK09	10.4230/oasics.atmos.2009.2141	OtherConf	2009	0	0	0	0	NaN
KanetAG04	10.1201/9780203489802.ch47	Incoll	2004	0	0	0	0	NaN
BeckF98	10.1609/aimag.v19i4.1426	AIJournal	1998	0	0	0	0	NaN

Table 2: Works Unknown to Crossref

Key	DOI	Source Group	Year	Nr Citations	Crossref Citations	Scopus Citations	Range Citations	Range Percentage
JuvinHHL23	10.4230/lipics.cp.2023.19	CP	2023	0	0	0	0	NaN
PovedaAA23	10.4230/lipics.cp.2023.31	CP	2023	0	0	0	0	NaN
AalianPG23	10.4230/lipics.cp.2023.6	CP	2023	0	0	0	0	NaN
KameugneFND23	10.4230/lipics.cp.2023.20	CP	2023	0	0	0	0	NaN
BoudreaultSLQ22	10.4230/lipics.cp.2022.10	CP	2022	0	0	0	0	NaN
PopovicCGNC22	10.4230/lipics.cp.2022.34	CP	2022	0	0	0	0	NaN
WinterMMW22	10.4230/lipics.cp.2022.41	CP	2022	0	0	0	0	NaN
ArmstrongGOS21	10.4230/lipics.cp.2021.16	CP	2021	1	0	1	1	100.00
AntuoriHHEN21	10.4230/lipics.cp.2021.14	CP	2021	0	0	1	1	100.00
KovacsTKSG21	10.4230/lipics.cp.2021.36	CP	2021	0	0	4	4	100.00
LacknerMMWW21	10.4230/lipics.cp.2021.37	CP	2021	0	0	3	3	100.00
WangB20	10.3233/faia200114	ECAI	2020	0	0	0	0	NaN
BarzegaranZP20	10.4230/oasics.fog-iot.2020.3	OtherConf	2020	0	0	0	0	NaN
BridiLBBM16	10.3233/978-1-61499-672-9-1598	ECAI	2016	0	0	0	0	NaN
BartakV15	10.5220/0005215701190130	OtherConf	2015	0	0	1	1	100.00

Key	DOI	Source Group	Year	Nr Citations	Crossref Citations	Scopus Citations	Range Citations	Range Percentage
TranB12	10.3233/978-1-61499-098-7-774	ECAI	2012	0	0	30	30	100.00
OddiRC10	10.3233/978-1-60750-606-5-967	ECAI	2010	0	0	2	2	100.00
Hunsberger08	10.3233/978-1-58603-891-5-553	ECAI	2008	0	0	1	1	100.00

Table 3: Works Unknown to Scopus

Key	DOI	Source Group	Year	Nr Citations	Crossref Citations	Scopus Citations	Range Citations	Range Percentage
Caballero23	10.1007/s10601-023-09357-0	Constraints	2023	0	0	0	0	NaN
NaderiBZ23	10.2139/ssrn.4494381	Preprint	2023	0	0	0	0	NaN
HebrardALLCMR22	10.24963/ijcai.2022/643	IJCAI	2022	0	0	0	0	NaN
NaderiBZ22	10.2139/ssrn.4140716	Preprint	2022	0	0	0	0	NaN
JuvinHL22	10.2139/ssrn.4068164	Preprint	2022	0	0	0	0	NaN
NaderiR22	10.1287/ijoo.2021.0056	ORJournal	2022	5	7	0	7	100.00
KotaryFH22	10.1609/aaai.v36i7.20685	AAAI	2022	0	2	0	2	100.00
QinWSLS21	10.1109/tase.2019.2947398	OtherJournal	2021	12	19	0	19	100.00
GeibingerMM21	10.1609/aaai.v35i7.16789	AAAI	2021	0	1	0	1	100.00
KletzanderMH21	10.1609/aaai.v35i13.17408	AAAI	2021	2	2	0	2	100.00
GodetLHS20	10.1609/aaai.v34i02.5510	AAAI	2020	1	1	0	1	100.00
FallahiAC20	10.1504/ijams.2020.10026882	OtherJournal	2020	0	0	0	0	NaN
NishikawaSTT19	10.15803/ijnc.9.2_131	OtherJournal	2019	3	3	0	3	100.00
BlazewiczEP19	10.1007/978-3-319-99849-7	Incoll	2019	38	38	0	38	100.00
RiahiNS018	10.1609/icaps.v28i1.13895	ICAPS	2018	4	4	0	4	100.00
AgussurjaKL18	10.1609/aaai.v32i1.12086	AAAI	2018	4	4	0	4	100.00
TranVNB17a	10.24963/ijcai.2017/726	IJCAI	2017	1	1	0	1	100.00
Bonfietti16	10.3233/ia-160095	AIJournal	2016	0	0	0	0	NaN
TranDRFWOVB16	10.1609/socs.v7i1.18390	OtherConf	2016	3	9	0	9	100.00
FrankDT16	10.1609/icaps.v26i1.13780	ICAPS	2016	4	5	0	5	100.00
KinsellaS0OS16	10.1609/aaai.v30i2.19079	AAAI	2016	1	2	0	2	100.00
Siala15	10.1007/s10601-015-9213-y	Constraints	2015	4	3	0	4	100.00
Kameugne15	10.1007/s10601-015-9227-5	Constraints	2015	0	0	0	0	NaN
LimBTBB15a	10.1609/aaai.v29i1.9236	AAAI	2015	3	3	0	3	100.00
FriedrichFMRSST14	10.1007/978-3-319-28697-6_23	OtherConf	2014	3	3	0	3	100.00

Key	DOI	Source Group	Year	Nr Citations	Crossref Citations	Scopus Citations	Range Citations	Range Percentage
LipovetzkyBPS14	10.1609/icaps.v24i1.13666	ICAPS	2014	5	5	0	5	100.00
LudwigKRBMS14	10.1609/aaai.v28i2.19030	AAAI	2014	1	1	0	1	100.00
ChunS14	10.1609/aaai.v28i2.19013	AAAI	2014	3	3	0	3	100.00
BonfiettiLM13	10.1609/icaps.v23i1.13608	ICAPS	2013	1	1	0	1	100.00
LombardiM13	10.1609/icaps.v23i1.13580	ICAPS	2013	3	0	0	3	100.00
TranTDB13	10.1609/icaps.v23i1.13552	ICAPS	2013	2	2	0	2	100.00
MalapertCGJLR13	10.1609/icaps.v23i1.13575	ICAPS	2013	0	0	0	0	NaN
BajestaniB11	10.1609/icaps.v21i1.13450	ICAPS	2011	2	2	0	2	100.00
Milano11	10.1002/9780470400531.eorms0473	Inbook	2011	0	0	0	0	NaN
Baptiste09	10.1007/978-3-642-04244-7_1	CP	2009	0	0	0	0	NaN
MonetteDH09	10.1609/icaps.v19i1.13356	ICAPS	2009	9	10	0	10	100.00
MercierH08	10.1287/ijoc.1070.0226	InformsJC	2008	32	33	0	33	100.00
AggounMV08	10.1007/978-0-387-74759-0_396	Inbook	2008	0	0	0	0	NaN
Limtanyakul07	10.1007/978-3-540-77903-2_65	OtherConf	2007	2	2	0	2	100.00
NeronABCDD06	10.1007/978-0-387-33768-5_7	Inbook	2006	3	3	0	3	100.00
DannaP04	10.1007/978-1-4419-8917-8_2	Inbook	2004	2	2	0	2	100.00
AjiliW04	10.1007/978-1-4419-8917-8_6	Inbook	2004	4	4	0	4	100.00
AggounV04	10.1007/978-3-540-24734-0_15	Inbook	2004	7	7	0	7	100.00
Tsang03	10.1023/a:1024016929283	OtherJournal	2003	1	0	0	1	100.00
DomdorfPH03	10.1007/978-3-642-18965-4_31	Inbook	2003	0	0	0	0	NaN
Apt03	10.1017/cbo9780511615320	Background	2003	381	374	0	381	100.00
ElkhyariGJ02	10.1007/3-540-46135-3_49	CP	2002	1	1	0	1	100.00
ZhuS02	10.1007/3-540-47961-9_69	OtherConf	2002	0	0	0	0	NaN
MilanoORT02	10.1287/ijoc.14.4.387.2830	InformsJC	2002	14	14	0	14	100.00
Hooker02	10.1287/ijoc.14.4.295.2828	InformsJC	2002	94	93	0	94	100.00
Hentenryck02	10.1287/ijoc.14.4.345.2826	Background	2002	48	50	0	50	100.00
BaptistePN01	10.1007/978-1-4615-1479-4	Book	2001	296	302	0	302	100.00
BosiM2001	10.1002/1097-024x(200101)31:1<17::aid-spe355>3.0.co;2-l	OtherJournal	2001	3	3	0	3	100.00
LopezAKYG00	10.1016/s0947-3580(00)71114-9	OtherJournal	2000	0	0	0	0	NaN
Hooker00	10.1002/9781118033036	Book	2000	185	186	0	186	100.00
Simonis99	10.1007/3-540-45406-3_6	OtherConf	1999	5	5	0	5	100.00
DorndorfPH99	10.1007/978-3-642-58409-1_35	OtherConf	1999	0	0	0	0	NaN
DorndorfHP99	10.1007/978-1-4615-5533-9_10	Inbook	1999	18	18	0	18	100.00
PembertonG98	10.1090/dimacs/057/06	OtherConf	1998	26	0	0	26	100.00
MarriottS98	10.7551/mitpress/5625.001.0001	Background	1998	410	423	0	423	100.00

Key	DOI	Source Group	Year	Nr Citations	Crossref Citations	Scopus Citations	Range Citations	Range Percentage
BeckDDF98	10.1002/(sici)1099-1425(199808)1:2<89::aid-jos9>3.0.co;2-h	OtherJournal	1998	9	8	0	9	100.00
Simonis95a	10.1007/3-540-60794-3_11	OtherConf	1995	1	1	0	1	100.00
BaptisteLV92	10.1109/robot.1992.220195	OtherConf	1992	13	11	0	13	100.00
CarlierP90	10.1007/bf03543071	Background	1990	112	114	0	114	100.00
CarlierP89	10.1287/mnsc.35.2.164	Background	1989	516	524	0	524	100.00
PritskerWW69	10.1287/mnsc.16.1.93	Background	1969	504	518	0	518	100.00

1.1 Range of Citation Counts

We get citation counts for the works included in the survey from different sources. OpenCitations provides the set of papers citing a reference, but only if both have DOIs. Crossref gives a count of how many papers cite a reference, they include some papers without DOI. Scopus gives a citation count, but does not give access to the actual citations. In this table we show the works with the largest range of citation count, excluding all background works. A typical issue is that one source does not cover the work, and has a zero count. An alternative is where papers with many citations give a slightly different count depending on which links are included in their database.

The results seem to indicate the using multiple sources is required, to avoid leaving out works that are not covered by one specific source.

Table 4: Works with largest Range of Citation Counts

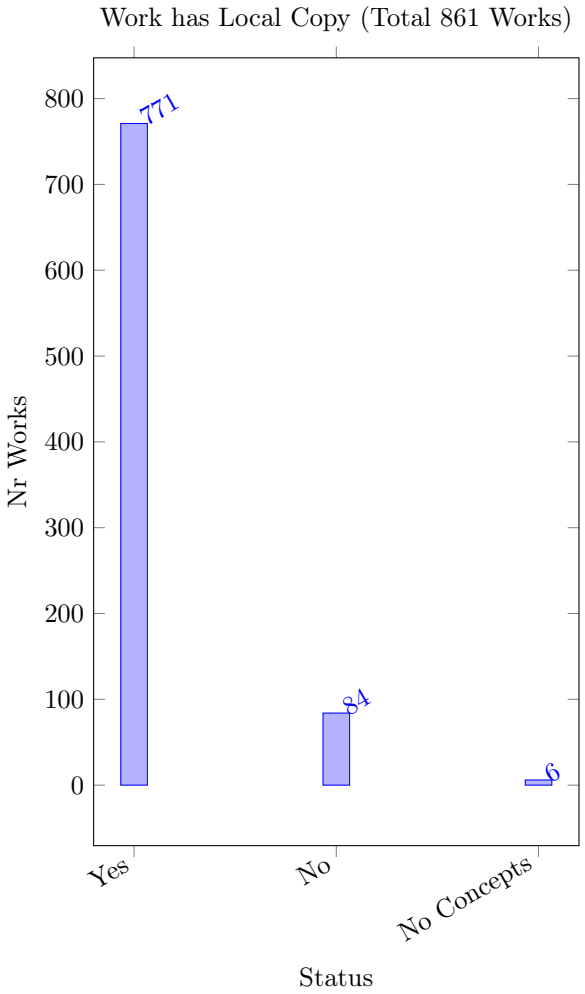
Key	DOI	Source Group	Year	Nr Citations	Crossref Citations	Scopus Citations	Range Citations	Range Percentage
BaptistePN01	10.1007/978-1-4615-1479-4	Book	2001	296	302	0	302	100.00
Hooker00	10.1002/9781118033036	Book	2000	185	186	0	186	100.00
BensanaLV99	10.1023/a:1026488509554	Constraints	1999	99	0	150	150	100.00
JainM99	10.1016/s0377-2217(98)00113-1	EJOR	1999	490	503	630	140	22.22
SakkoutW00	10.1023/a:1009856210543	Constraints	2000	73	0	105	105	100.00
Hooker02	10.1287/ijoc.14.4.295.2828	InformsJC	2002	94	93	0	94	100.00
MintonJPL92	10.1016/0004-3702(92)90007-k	AIJournal	1992	437	440	525	88	16.76
BaptistePN99	10.1023/a:1018995000688	ORJournal	1999	72	0	85	85	100.00
OhrimenkoSC09	10.1007/s10601-008-9064-x	Constraints	2009	127	128	198	71	35.86
BlazewiczDP96	10.1016/0377-2217(95)00362-2	EJOR	1996	344	357	412	68	16.50
RodosekWH99	10.1023/a:1018904229454	ORJournal	1999	53	0	67	67	100.00
ArtiguesDN08	10.1002/9780470611227	Book	2008	63	0	0	63	100.00
BaptisteP00	10.1023/a:1009822502231	Constraints	2000	46	0	62	62	100.00
BeldiceanuC94	10.1016/0895-7177(94)90127-9	OtherJournal	1994	167	169	223	56	25.11

Key	DOI	Source Group	Year	Nr Citations	Crossref Citations	Scopus Citations	Range Citations	Range Percentage
LaborieRSV18	10.1007/s10601-018-9281-x	Constraints	2018	148	178	203	55	27.09
HookerO03	10.1007/s10107-003-0375-9	OtherJournal	2003	317	333	371	54	14.56
MengZRZL20	10.1016/j.cie.2020.106347	OtherJournal	2020	100	133	152	52	34.21
Wallace96	10.1007/bf00143881	Constraints	1996	87	89	138	51	36.96
NuijtenP98	10.1023/a:1009687210594	OtherJournal	1998	42	0	50	50	100.00
Laborie03	10.1016/s0004-3702(02)00362-4	AIJournal	2003	128	129	175	47	26.86
BeckR03	10.1023/a:1021849405707	ORJournal	2003	29	0	45	45	100.00
AchterbergBKW08	10.1007/978-3-540-68155-7_4	CPAIOR	2008	80	80	125	45	36.00
JainG01	10.1287/ijoc.13.4.258.9733	InformsJC	2001	279	284	321	42	13.08
Laborie09	10.1007/978-3-642-01929-6_12	CPAIOR	2009	53	52	91	39	42.86
BlazewiczEP19	10.1007/978-3-319-99849-7	Incoll	2019	38	38	0	38	100.00
HarjunkoskiMBC14	10.1016/j.compchemeng.2013.12.001	OtherJournal	2014	381	393	418	37	8.85
SadehF96	10.1016/0004-3702(95)00098-4	AIJournal	1996	95	97	131	36	27.48
BeckW07	10.1613/jair.2080	AIJournal	2007	27	31	61	34	55.74
Ham18	10.1016/j.trc.2018.03.025	OtherJournal	2018	164	192	197	33	16.75
MercierH08	10.1287/ijoc.1070.0226	InformsJC	2008	32	33	0	33	100.00
PerronSF04	10.1007/978-3-540-30201-8_35	CP	2004	34	34	67	33	49.25
SchildW00	10.1023/a:1009804226473	Constraints	2000	23	0	32	32	100.00
CorreaLR07	10.1016/j.cor.2005.07.004	ORJournal	2007	106	114	137	31	22.63
LiW08	10.1007/s10951-008-0079-3	OtherJournal	2008	113	123	144	31	21.53
TranB12	10.3233/978-1-61499-098-7-774	ECAI	2012	0	0	30	30	100.00
Thorsteinsson01	10.1007/3-540-45578-7_2	CP	2001	67	68	97	30	30.93
AggounB93	10.1016/0895-7177(93)90068-a	OtherJournal	1993	187	191	214	27	12.62
PembertonG98	10.1090/dimacs/057/06	OtherConf	1998	26	0	0	26	100.00
Beck10	10.1007/978-3-642-15396-9_10	CP	2010	19	21	45	26	57.78
NuijtenA96	10.1016/0377-2217(95)00354-1	EJOR	1996	65	65	90	25	27.78
VilimLS15	10.1007/978-3-319-18008-3_30	CPAIOR	2015	31	31	55	24	43.64
Rodriguez07	10.1016/j.trb.2006.02.006	OtherJournal	2007	117	121	141	24	17.02
Hooker07	10.1287/opre.1060.0371	ORJournal	2007	181	197	205	24	11.71
MengGRZSC22	10.1016/j.swevo.2022.101058	OtherJournal	2022	38	56	62	24	38.71
Davis87	10.1016/0004-3702(87)90091-9	AIJournal	1987	308	312	332	24	7.23
Beck07	10.1613/jair.2169	AIJournal	2007	34	34	57	23	40.35
HarjunkoskiG02	10.1016/s0098-1354(02)00100-x	OtherJournal	2002	169	173	192	23	11.98
KuB16	10.1016/j.cor.2016.04.006	ORJournal	2016	119	132	141	22	15.60
BartakSR08	10.1007/s10845-008-0203-4	OtherJournal	2008	54	57	76	22	28.95

Key	DOI	Source Group	Year	Nr Citations	Crossref Citations	Scopus Citations	Range Citations	Range Percentage
BourdaisGP03	10.1007/978-3-540-45193-8_11	CP	2003	29	30	51	22	43.14

1.2 Local Copies

The tool relies on local pdf copies of works to perform a detailed analysis of the content of the work. We have collected our own private copies of works for that purpose. The following plot shows how many entries do not have a local copy, or which do not extract any concepts from the local copy. A detailed list of all missing entries is given in the main report. Note that in some cases we use an open access version of the work, which might differ slightly from the published version.



1.3 Orphan Files

The following list shows entries for which we have a pdf file in the works directory, but the name of hte file does not match any key in the bibliography. These orphans should be resolved, either by correcting the name, or adding a bib entry for the work, or by removing the file, if it is not required.

If there are no files listed, then all pdf files in the works directory correspond to a bib entry, and no clean-up is required.

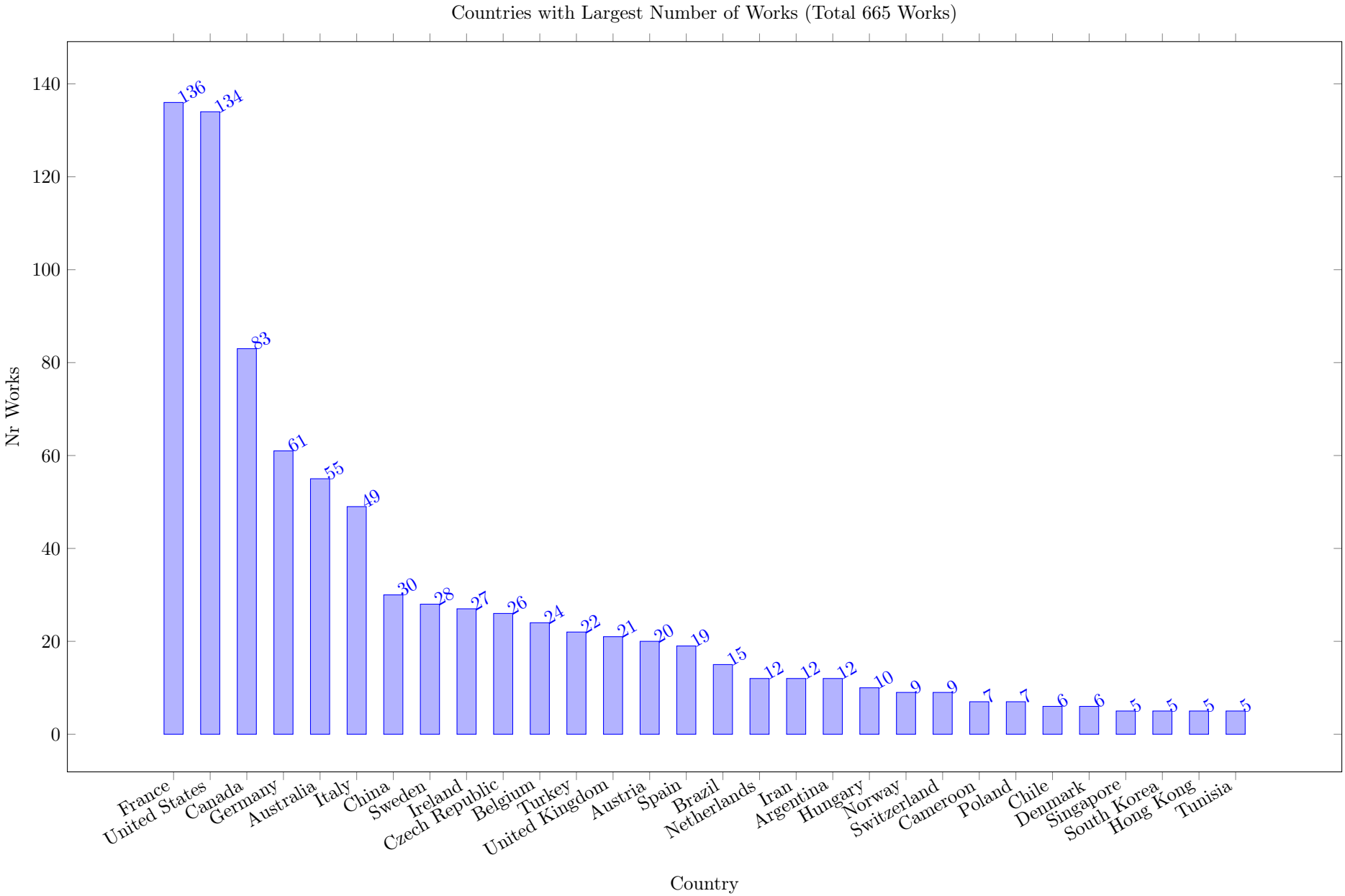
Table 5: Orphan Files

Key	File

2 Works by Location

This section analyzes papers by affiliation, which is given by the Scopus data only. Only works which are covered by Scopus are included. We first present the number of papers by country. A paper is counted in this analysis (once), if at least one of the affiliations is from the country. Multiple affiliations from the same country only count once. The 30 countries with the largest counts are shown.

Note that one work will be counted for multiple countries, if the affiliations are from different countries. So the sum of the bar heights typically exceeds the total number of works considered.


Countries with Largest Number of Works (Total 665 Works)
Nr Works
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80
100
120
140
136
134
83
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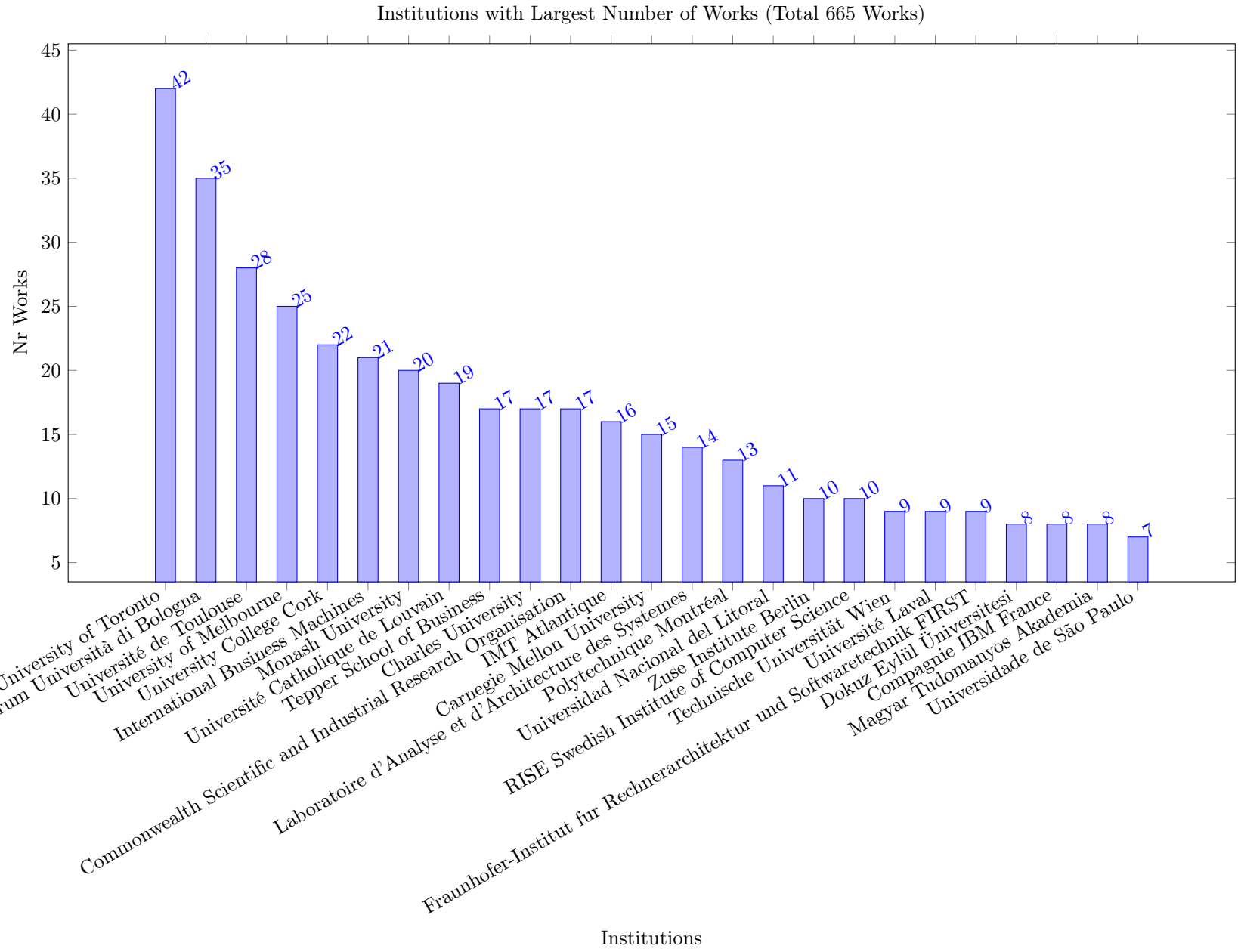
France
United States
Canada
Germany
Australia
Italy
China
Sweden
Ireland
Czech Republic
Belgium
Turkey
United Kingdom
Austria
Spain
Brazil
Netherlands
Iran
Argentina
Hungary
Norway
Switzerland
Cameroon
Poland
Chile
Denmark
Singapore
South Korea
Hong Kong
Tunisia
Country

The next plot shows the number of papers associated to institutions, as stated in the Scopus affiliation. A work is counted, if at least one of the affiliations is from a given institution. Due to the format of the Scopus data, we cannot fractionally assign a paper based on the author affiliations, each paper is counted one for every institution for which an affiliation is given. If some author has multiple affiliations listed, we (mis)count the work for each of them.


Institutions with Largest Number of Works (Total 665 Works)
Nr Works
Institutions
45
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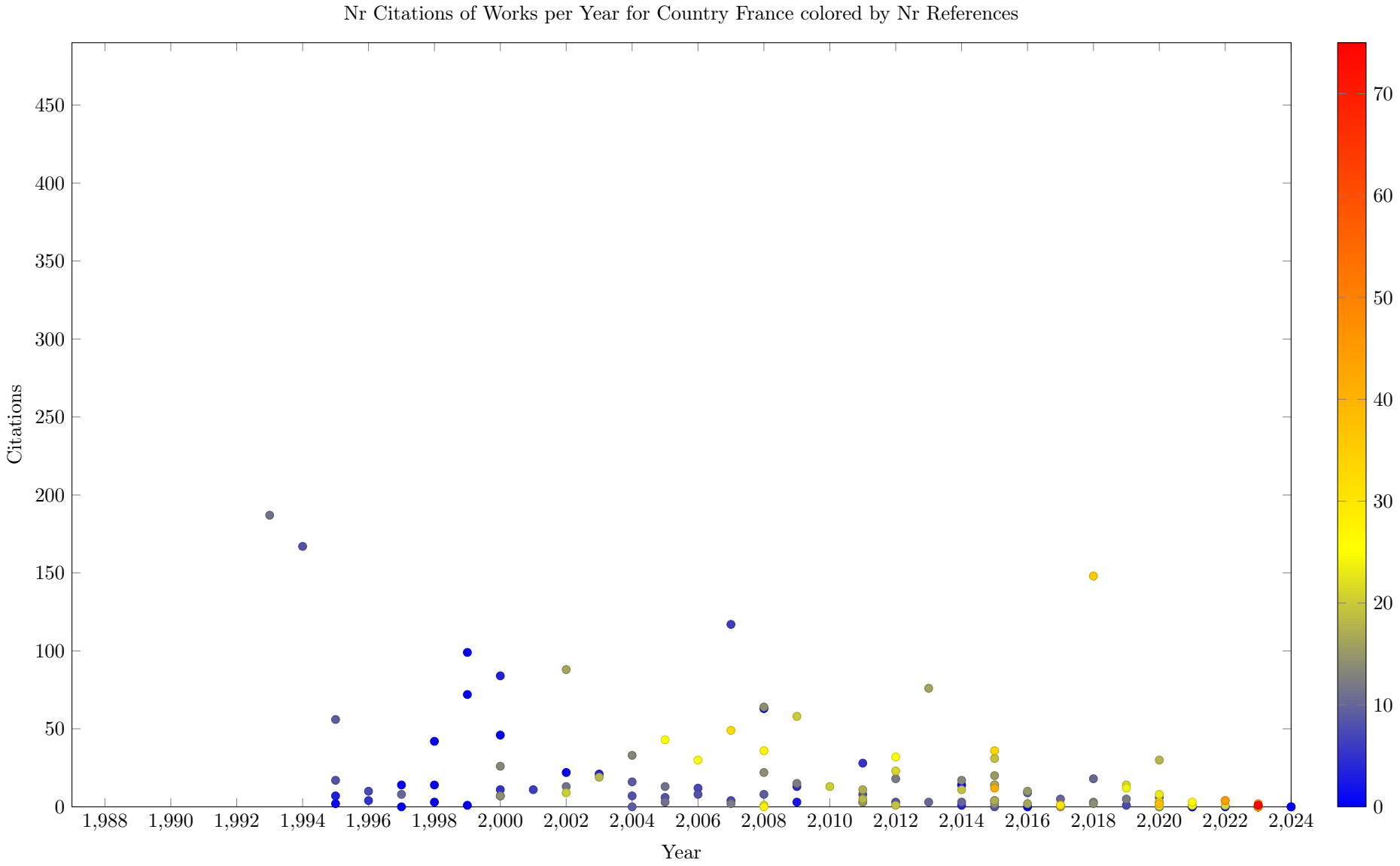
University of Toronto
Alma Mater Studiorum Università di Bologna
Université de Toulouse
University of Melbourne
University College Cork
International Business Machines
Monash University
Université Catholique de Louvain
Tepper School of Business
Charles University
Commonwealth Scientific and Industrial Research Organisation
IMT Atlantique
Carnegie Mellon University
Laboratoire d'Analyse et d'Architecture des Systemes
Polytechnique Montréal
Universidad Nacional del Litoral
RISE Swedish Institute of Computer Science
Zuse Institute Berlin
Technische Universität Wien
Fraunhofer-Institut fur Rechnerarchitektur und Softwaretechnik
Université Laval
Dokuz Eylül Üniversitesi
FIRST
Compagnie IBM France
Magyar Tudomanyos Akademia
Universidade de São Paulo

The following plots show for the top 30 countries when the works included were published, and how many citations (OpenCitation count) each paper had. The scatter plots are colored by the number of references (OpenCitation count), this help to identify surveys more easily. The plot gives an indication in which period the work from the country falls, and how influential the published works are. The x and y ranges of all plots are uniform to allow comparison between plots.

It would be nice to have tooltips on the plots, so identify specific works in the plots. This is currently not supported by the framework library used.


Nr Citations of Works per Year for Country France colored by Nr References
Citations
0
50
100
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Year
1,988
1,990
1,992
1,994
1,996
1,998
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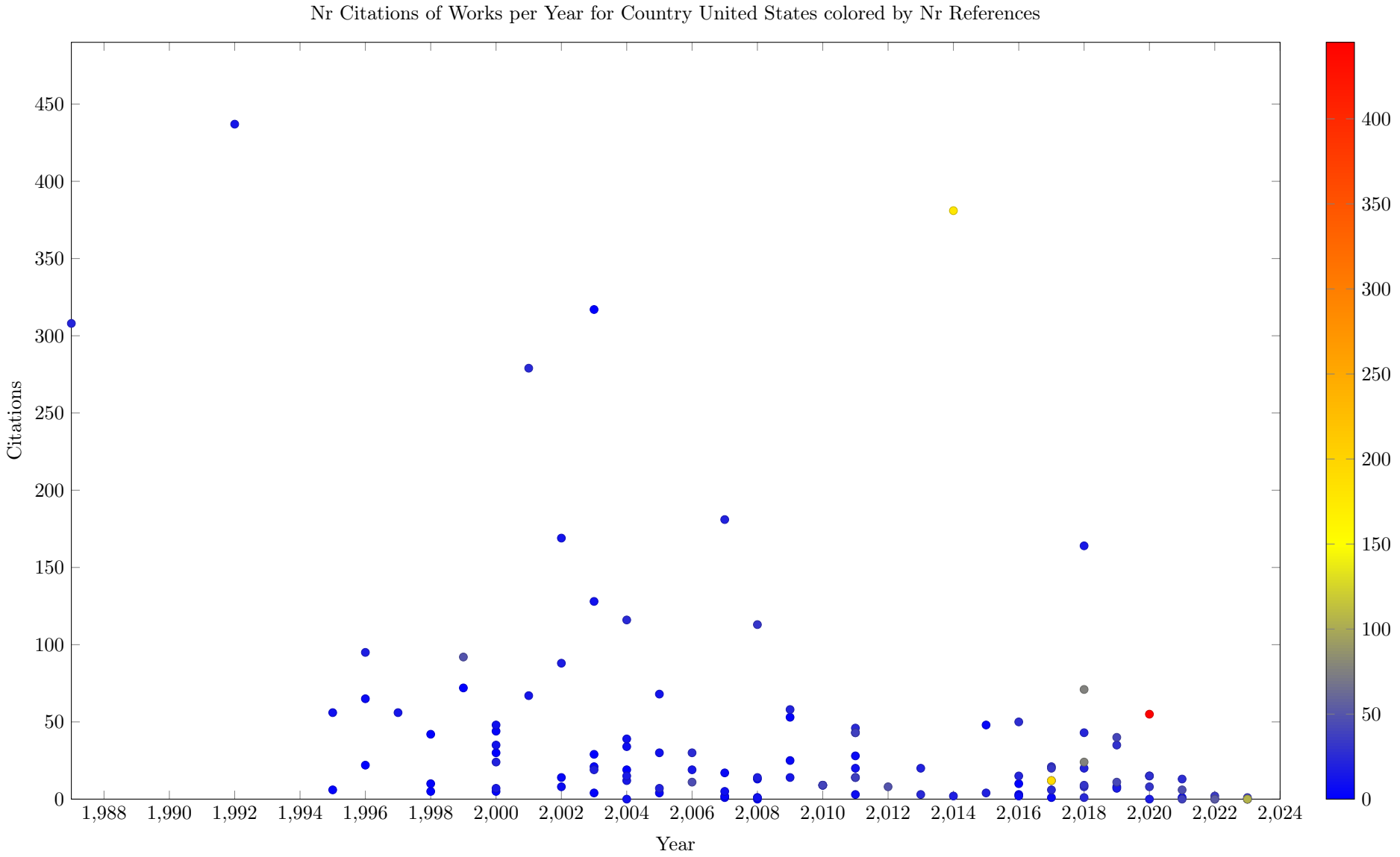
Nr Citations of Works per Year for Country United States colored by Nr References
Citations
0
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Year
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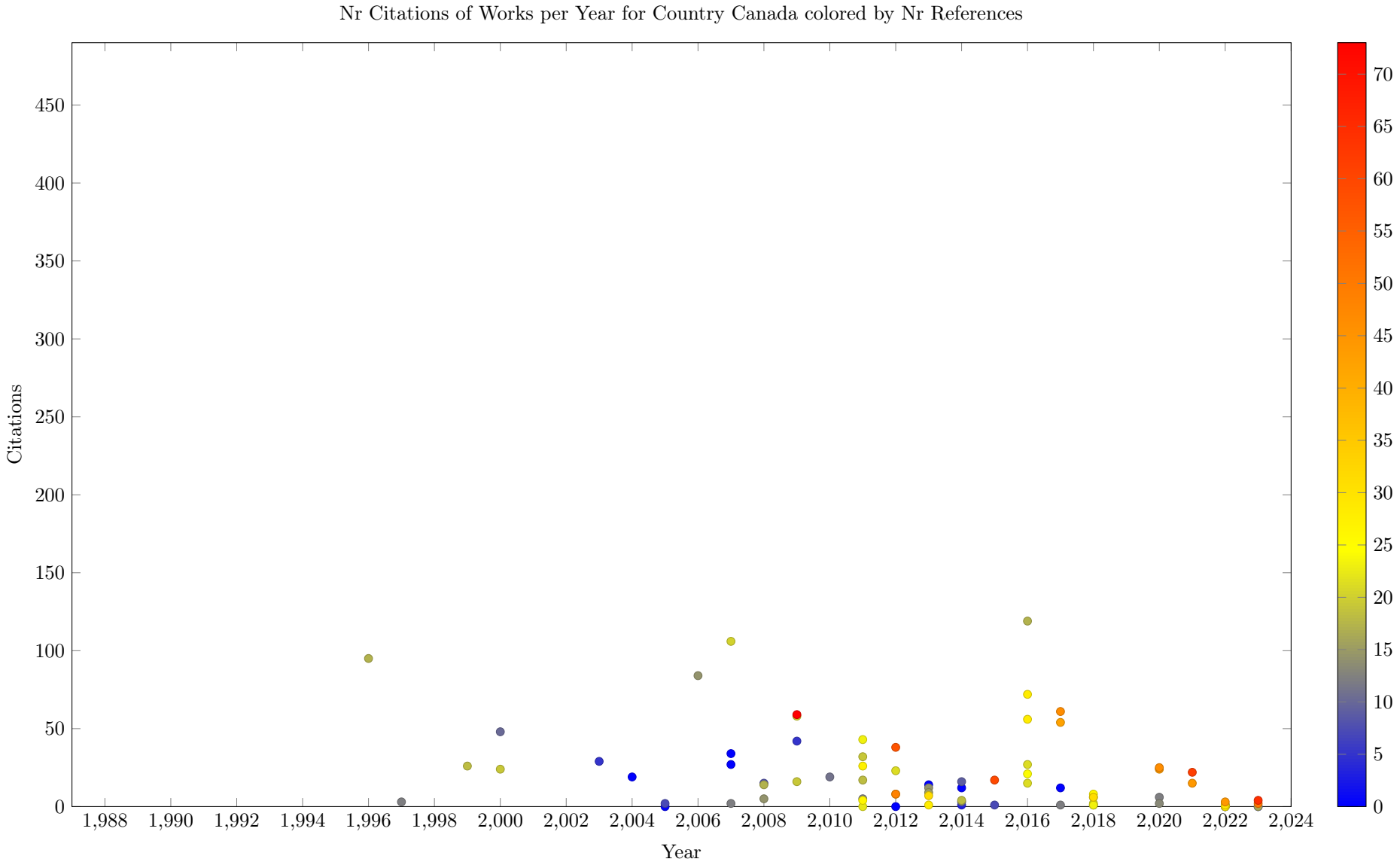
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Citations
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Year
1,988
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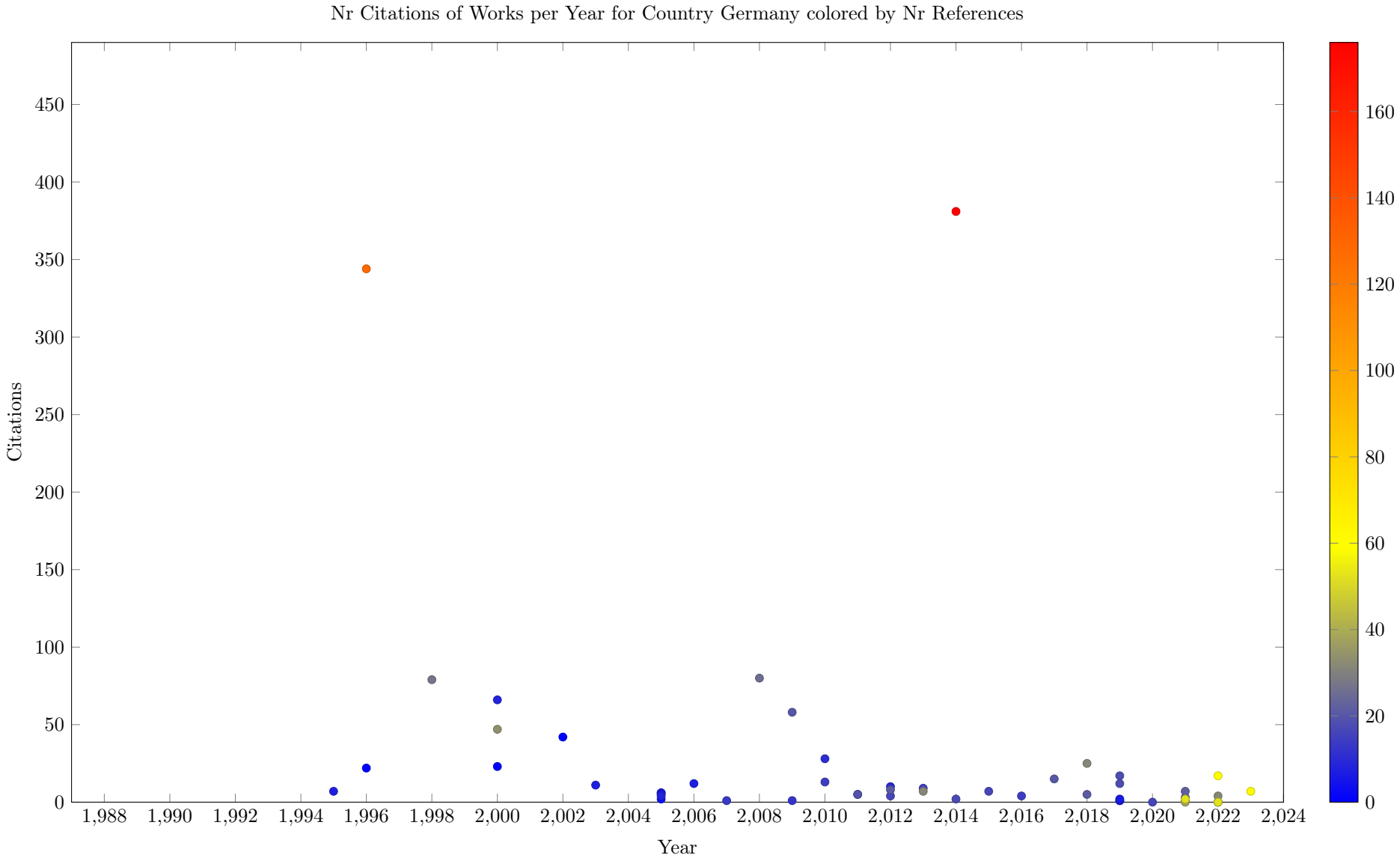
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Year
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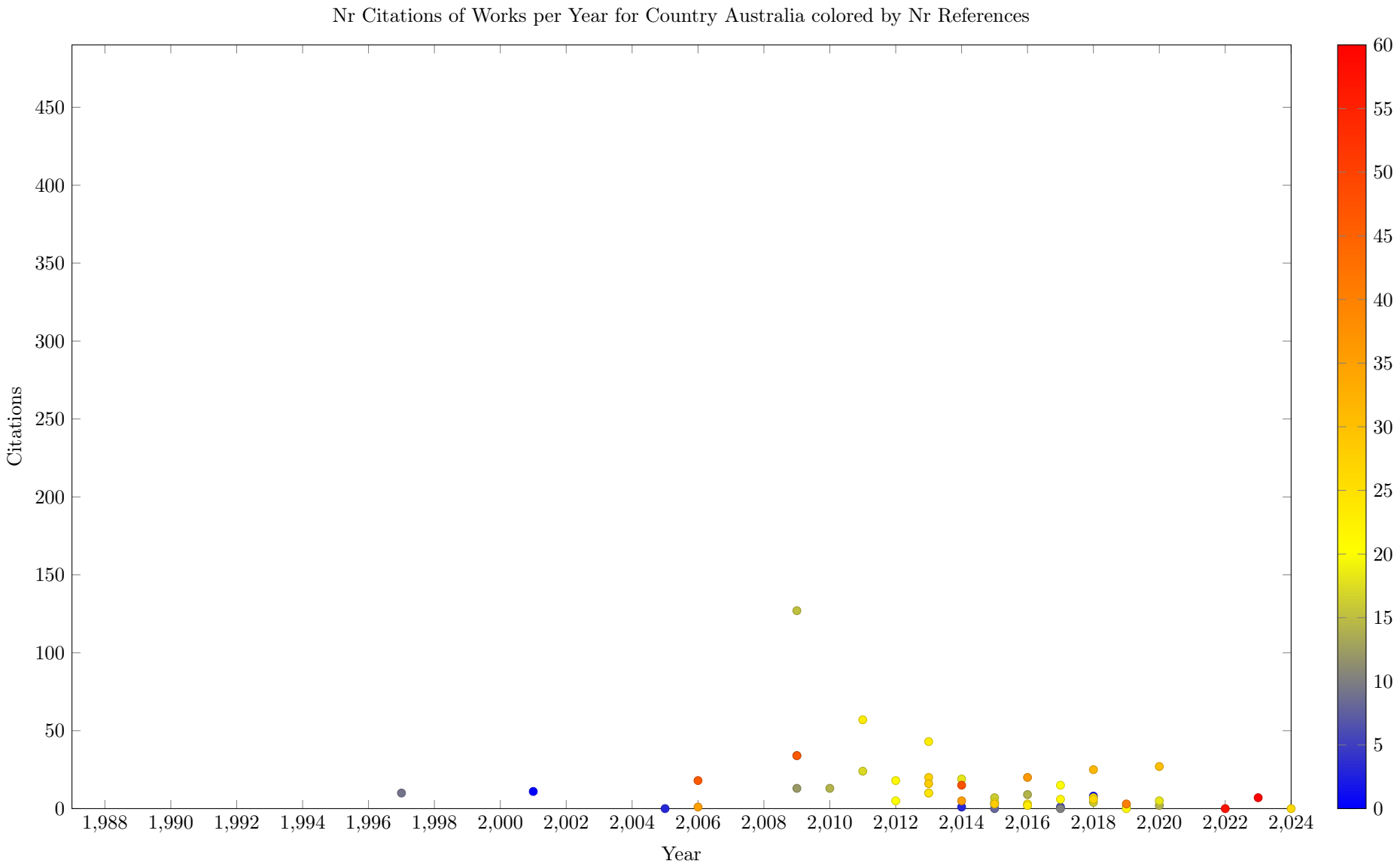
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Citations
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Year
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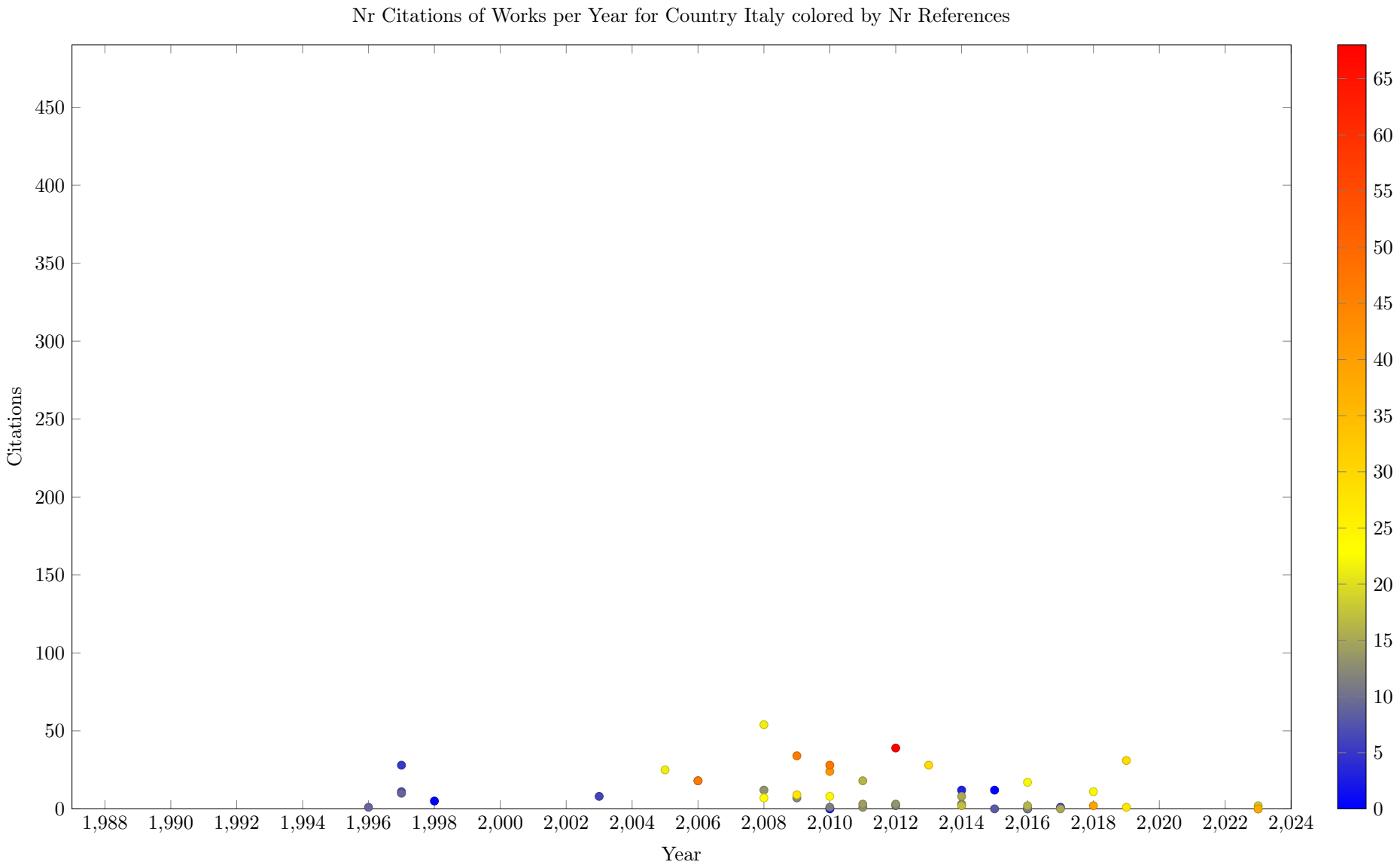
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Citations
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Year
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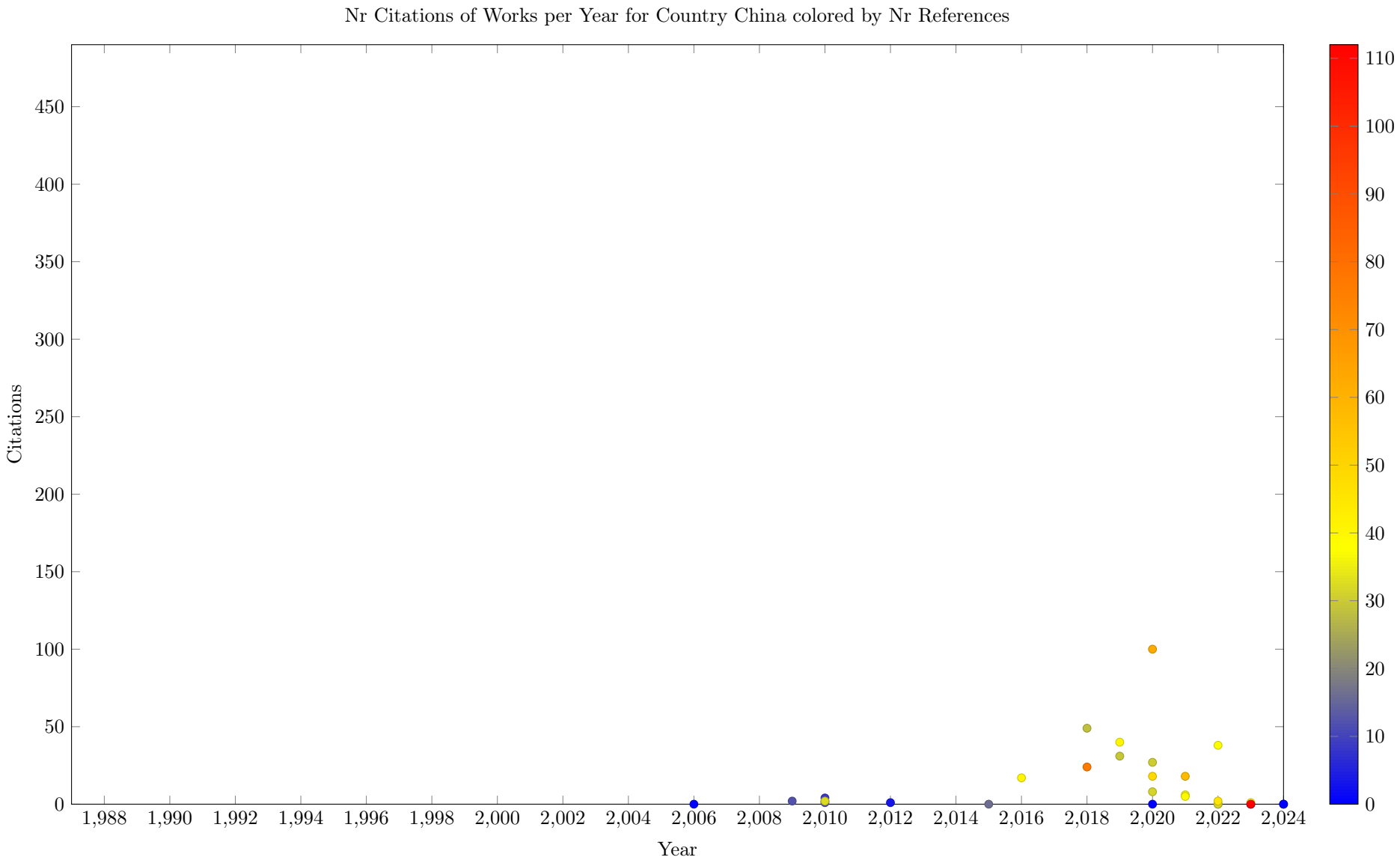
Nr Citations of Works per Year for Country China colored by Nr References
Citations
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Year
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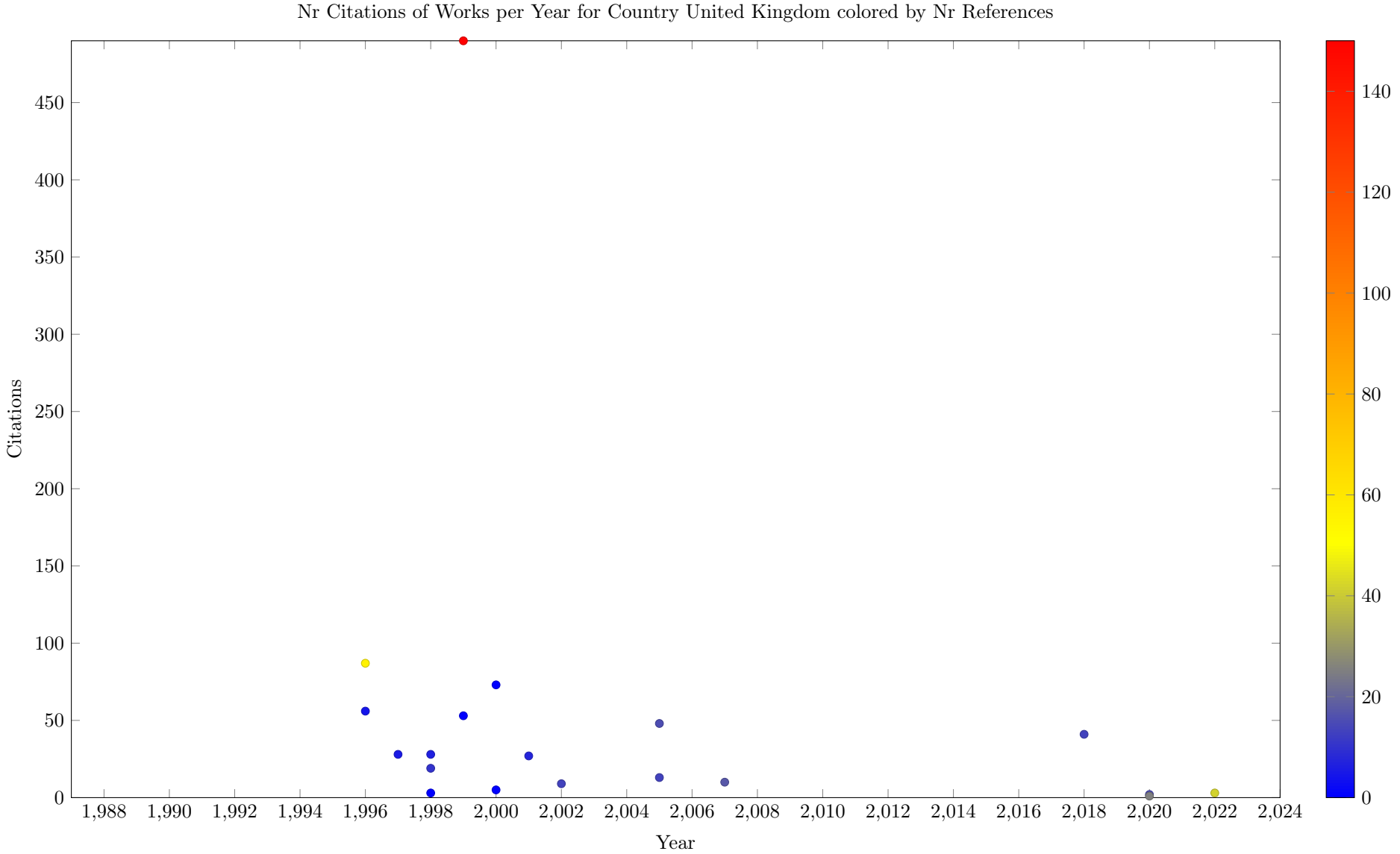
Nr Citations of Works per Year for Country United Kingdom colored by Nr References
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Year
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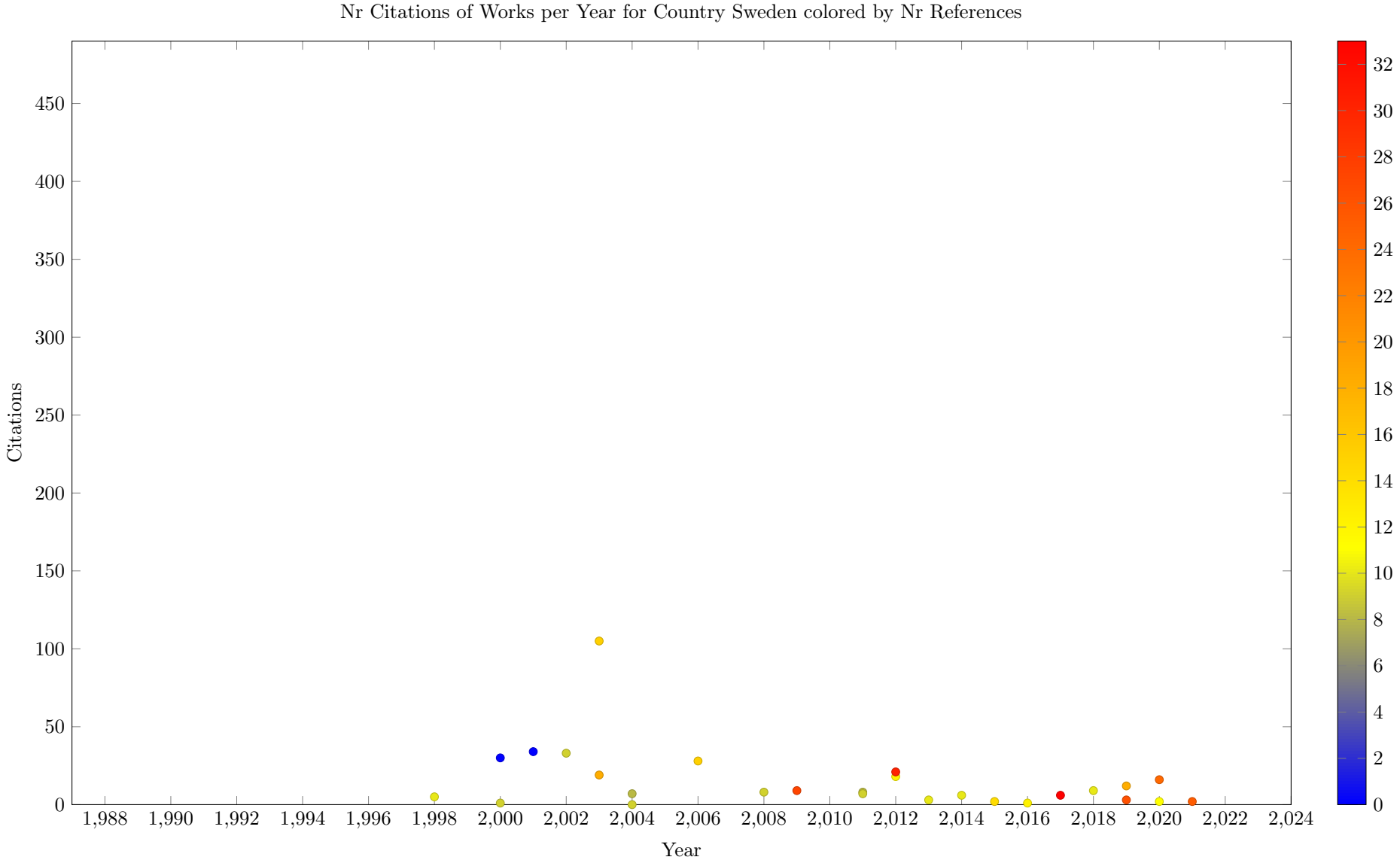
Nr Citations of Works per Year for Country Sweden colored by Nr References
Citations
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Year
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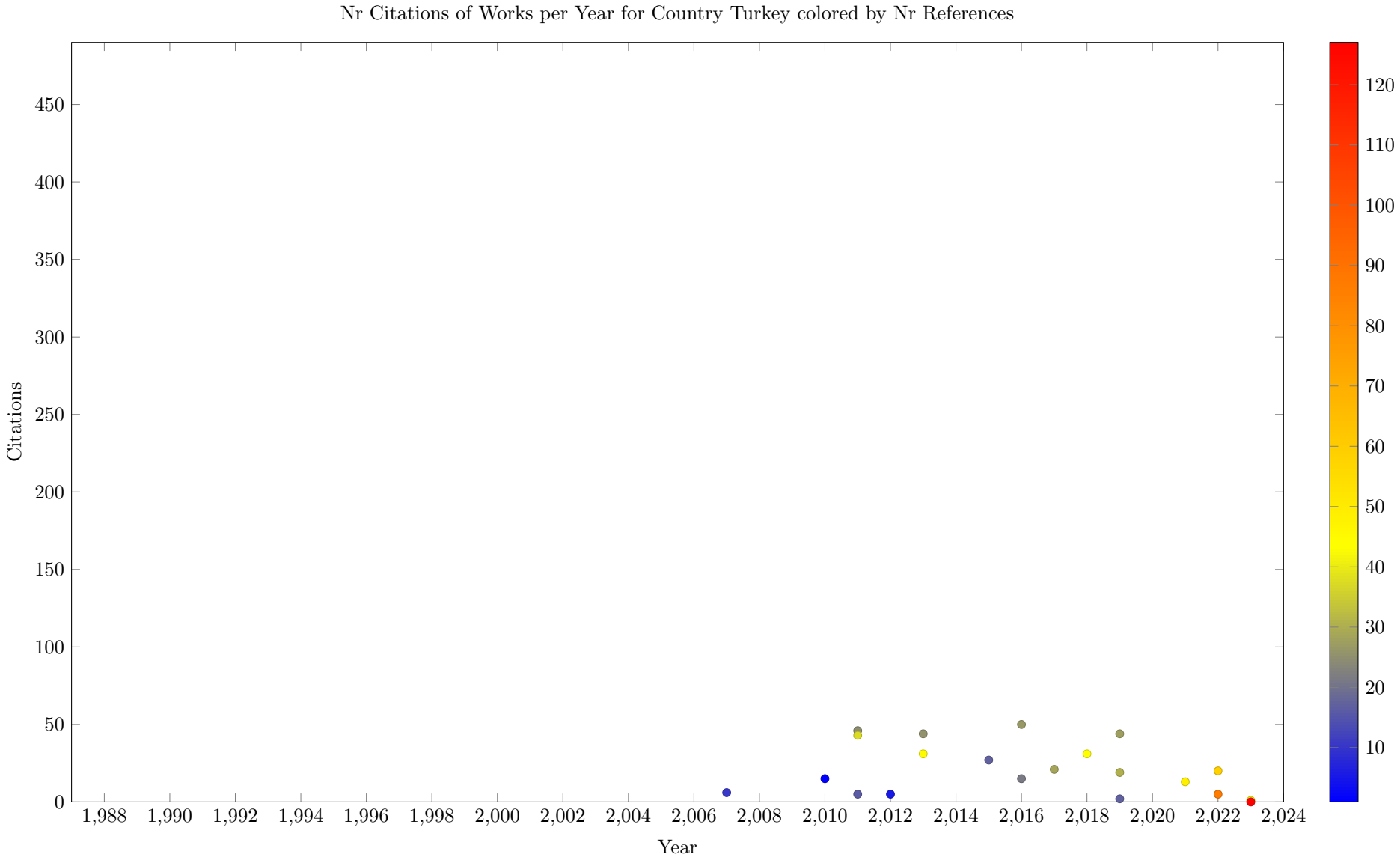
Nr Citations of Works per Year for Country Turkey colored by Nr References
Citations
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Year
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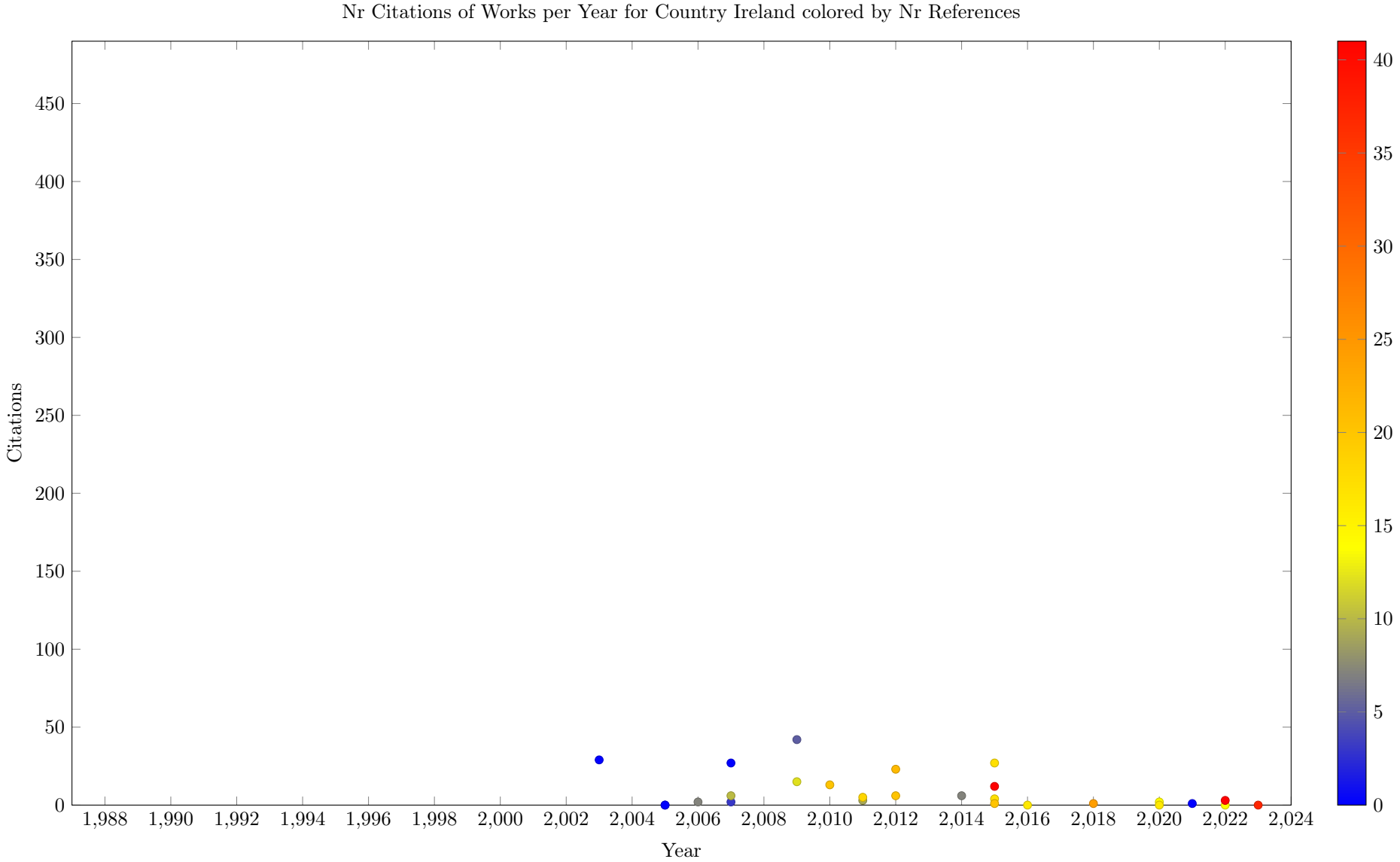
Nr Citations of Works per Year for Country Ireland colored by Nr References
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Year
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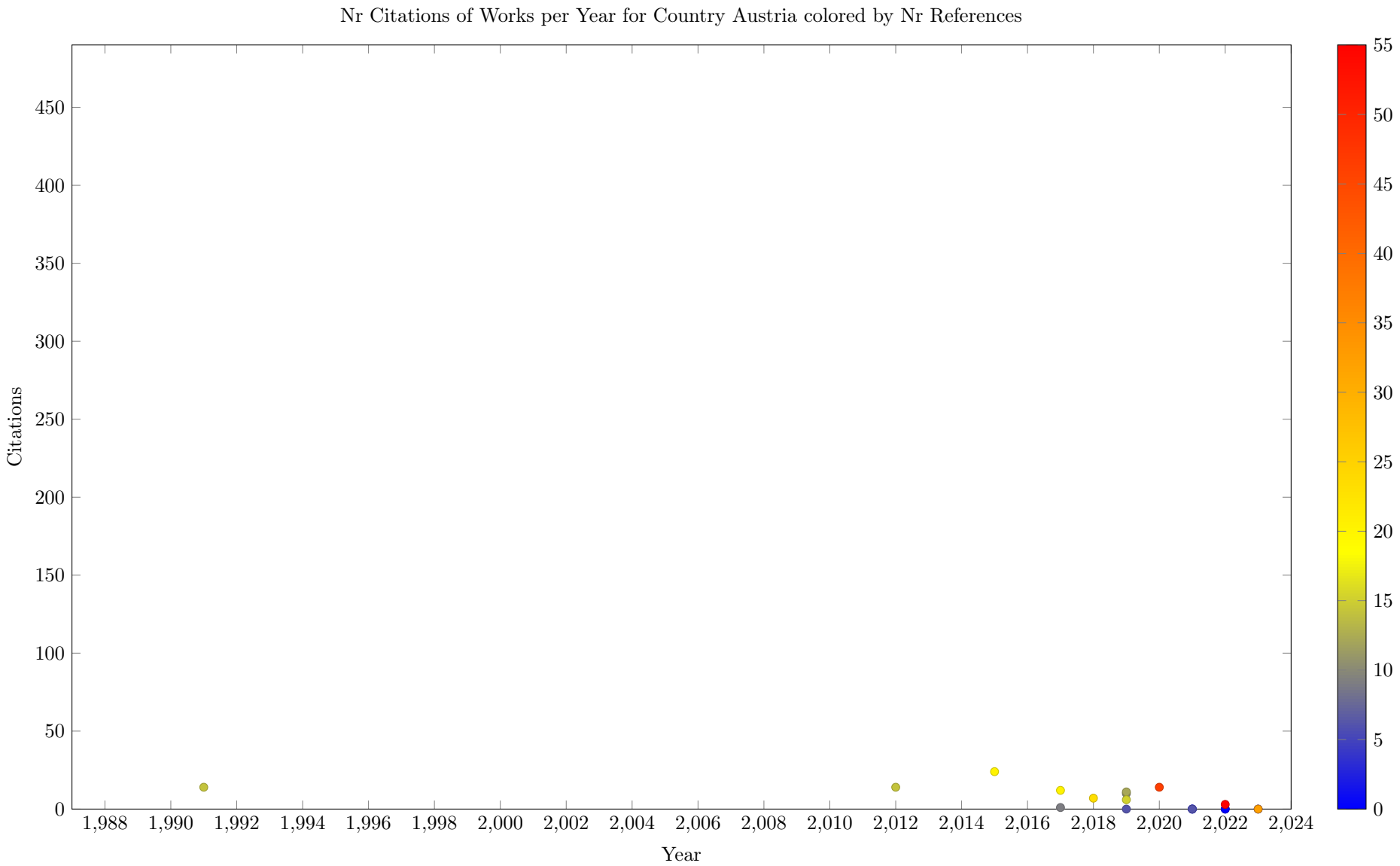
Nr Citations of Works per Year for Country Austria colored by Nr References
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Year
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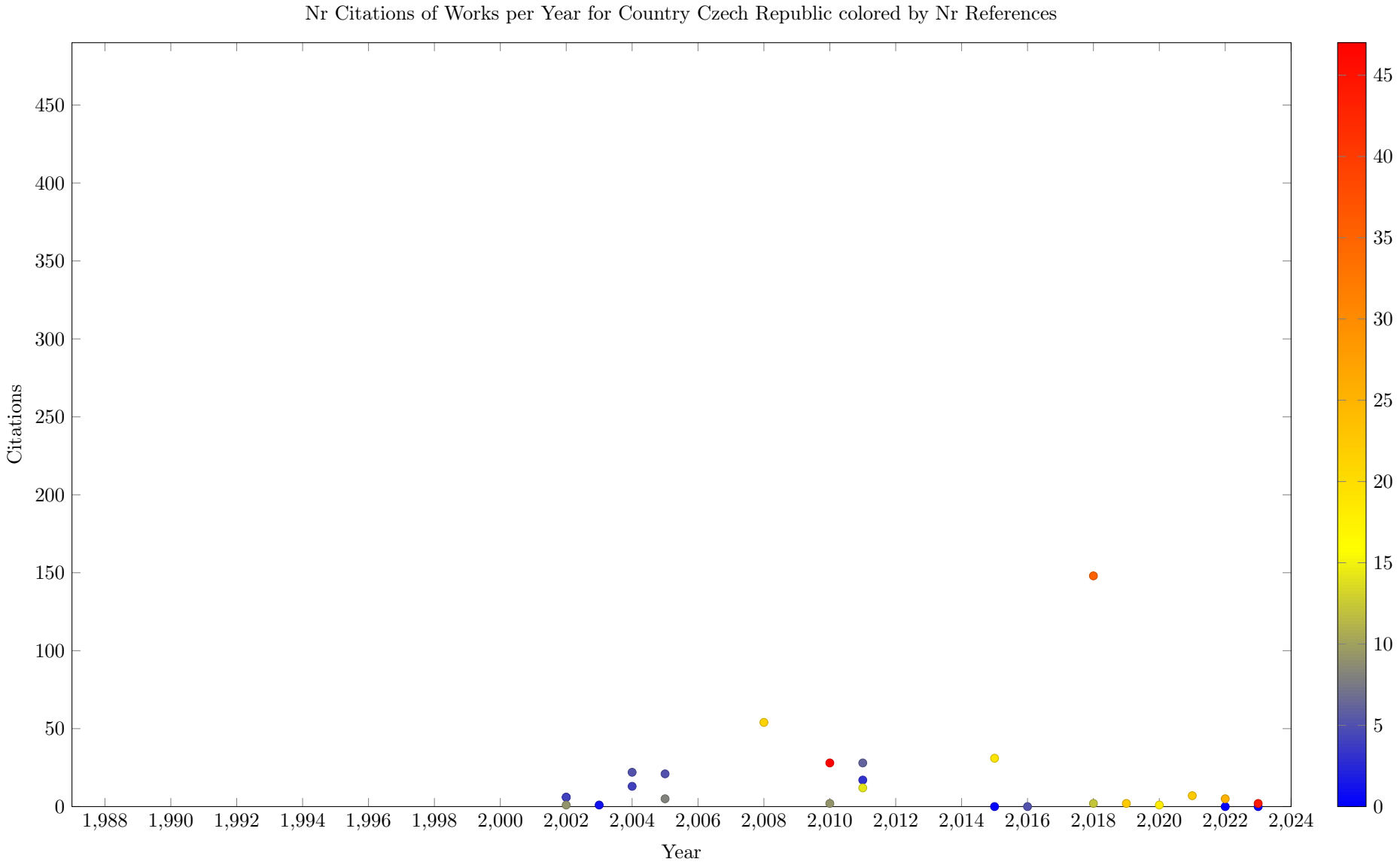
Nr Citations of Works per Year for Country Czech Republic colored by Nr References
Citations
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350
400
450
Year
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Nr Citations of Works per Year for Country Belgium colored by Nr References
Citations
0
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100
150
200
250
300
350
400
450
Year
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1,990
1,992
1,994
1,996
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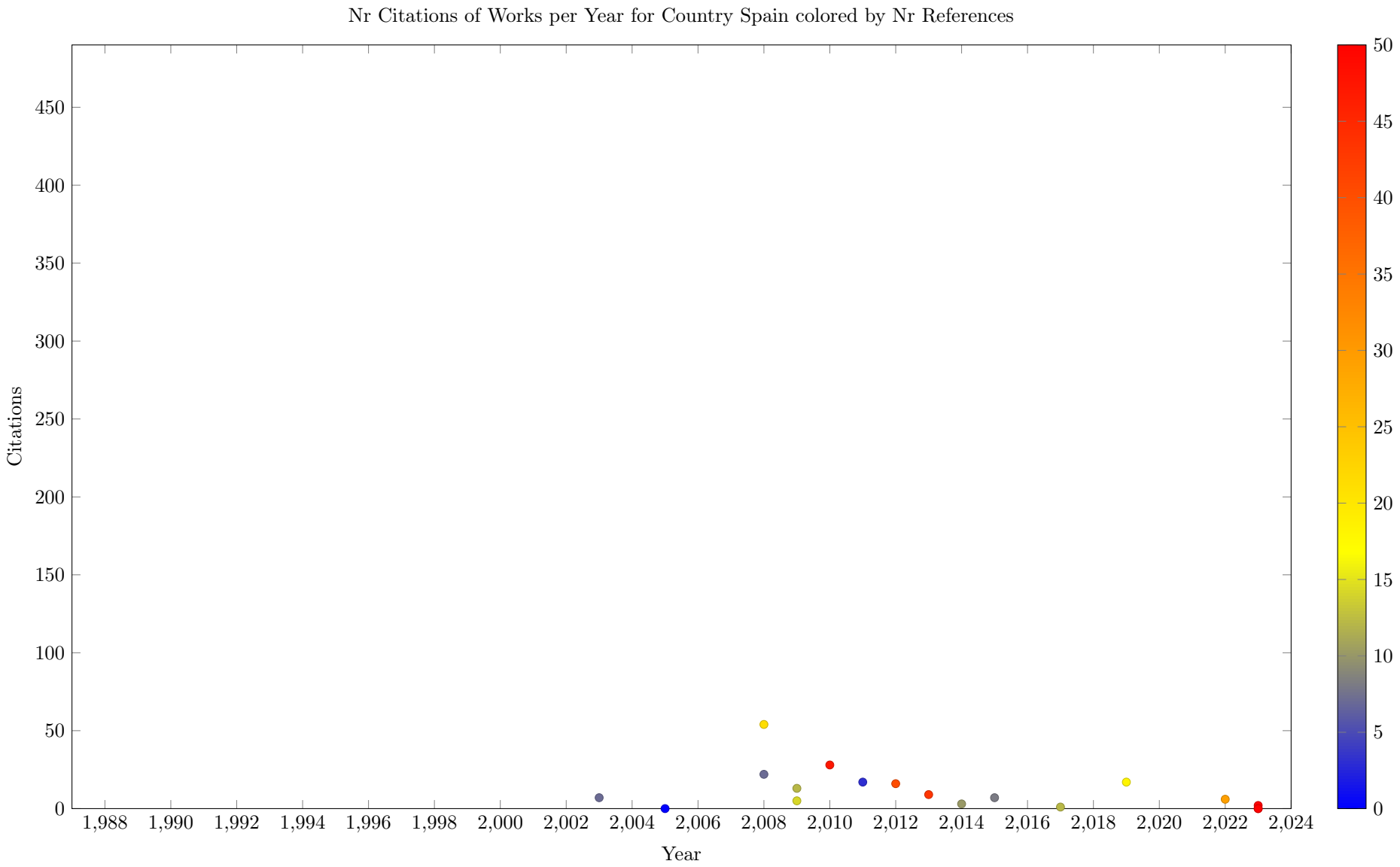
Nr Citations of Works per Year for Country Spain colored by Nr References
Citations
0
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100
150
200
250
300
350
400
450
Year
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1,992
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1,996
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2,012
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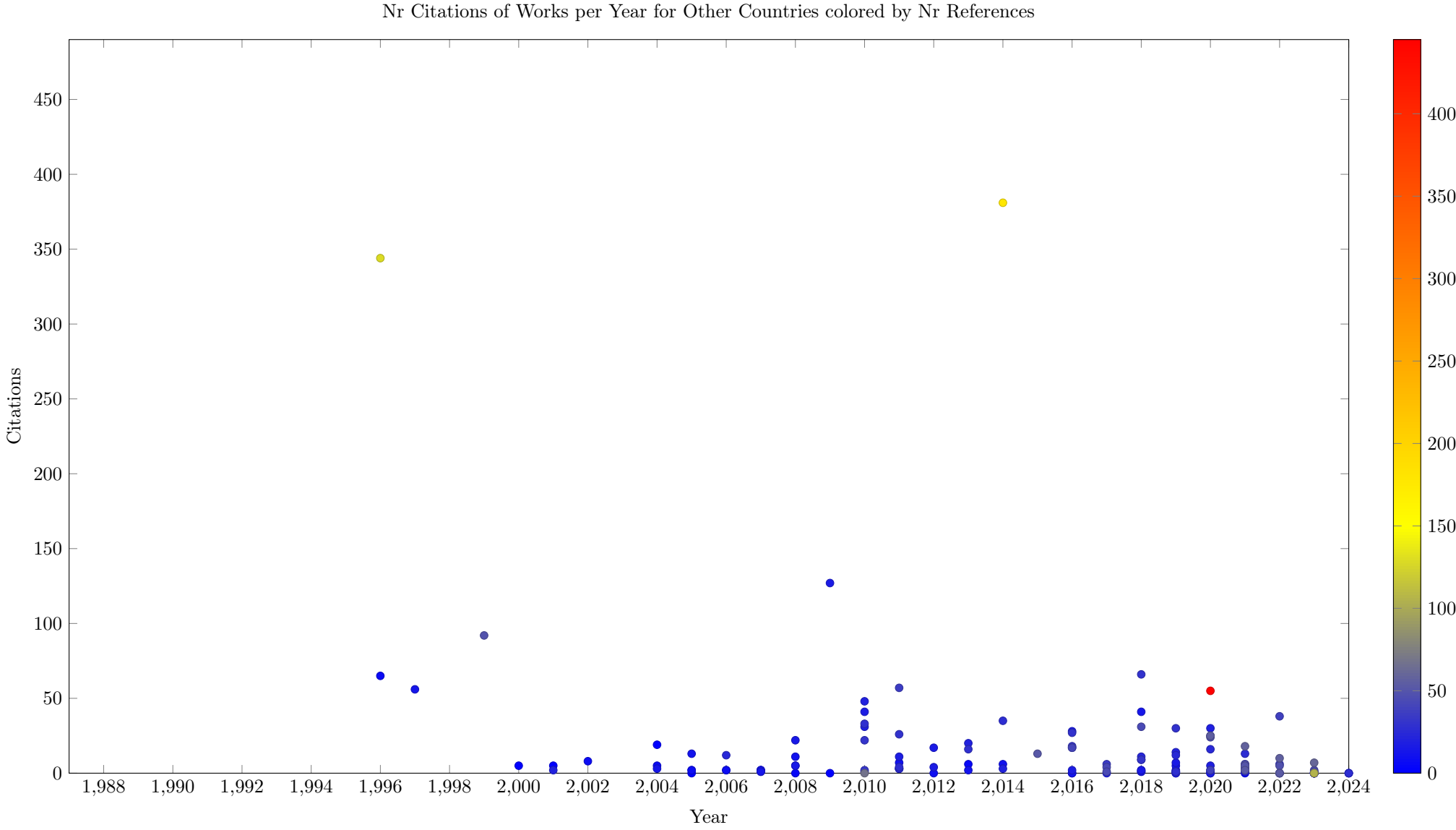
Nr Citations of Works per Year for Other Countries colored by Nr References
Citations
Year
0
50
100
150
200
250
300
350
400
450
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2,006
2,008
2,010
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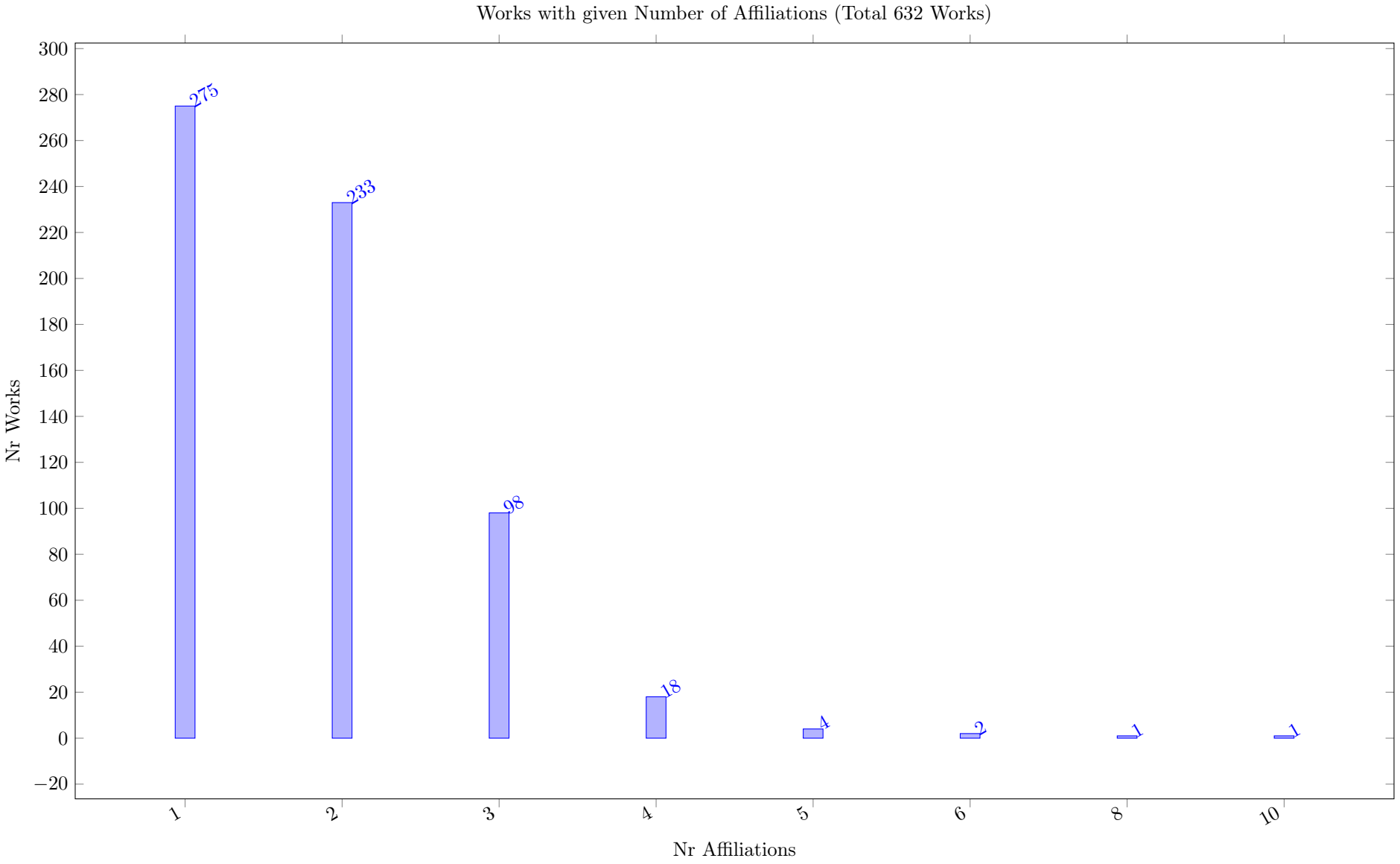
2,014
2,016
2,018
2,020
2,022
2,024

3 Collaborations

This section shows data about collaborations between multiple affiliations for the same work. This is based on Scopus data, which associates the affiliation with the work, not with each author of the work. The analysis excludes background work.


Works with given Number of Affiliations (Total 632 Works)
Nr Works
Nr Affiliations
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
−20
275
233
98
18
4
2
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1
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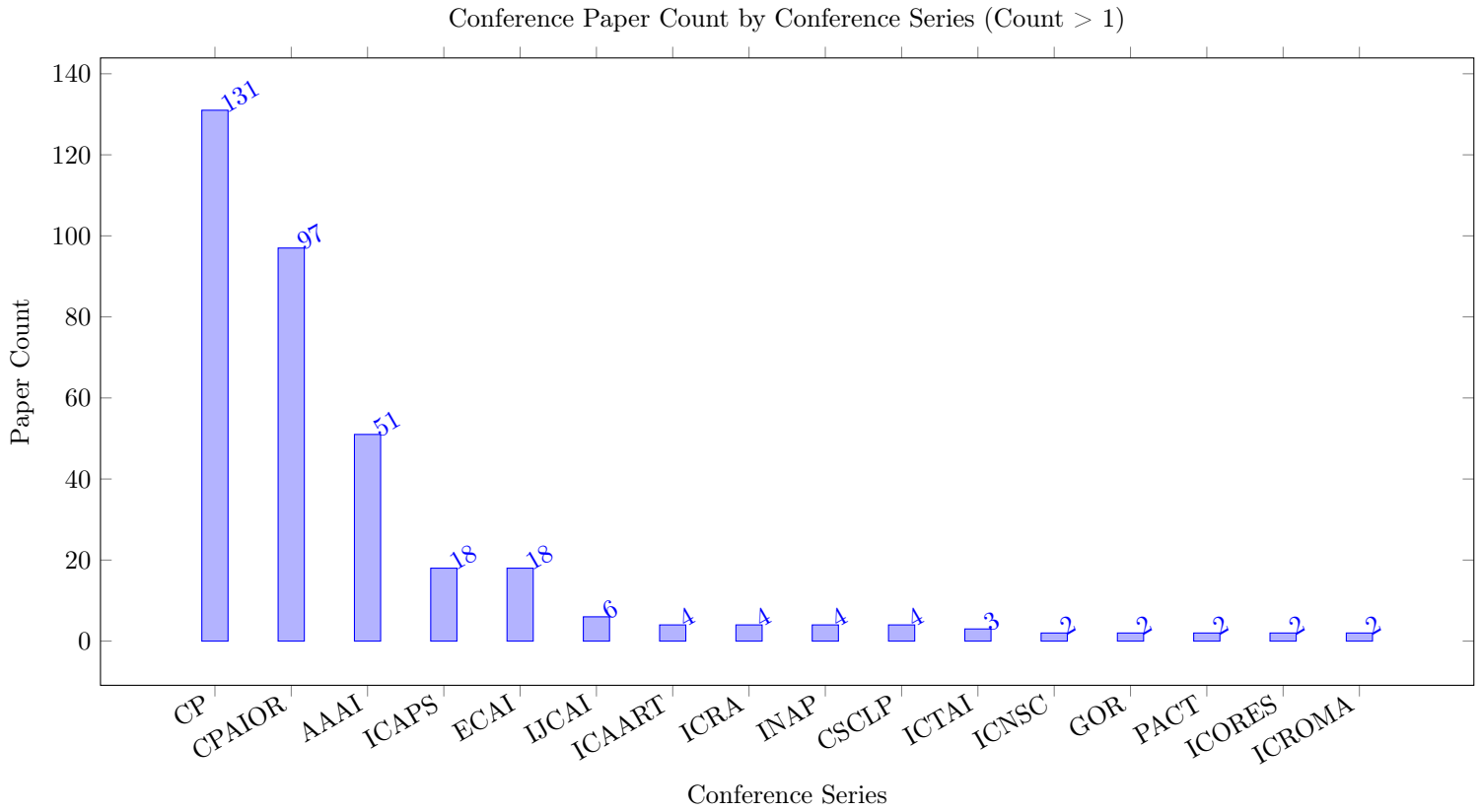
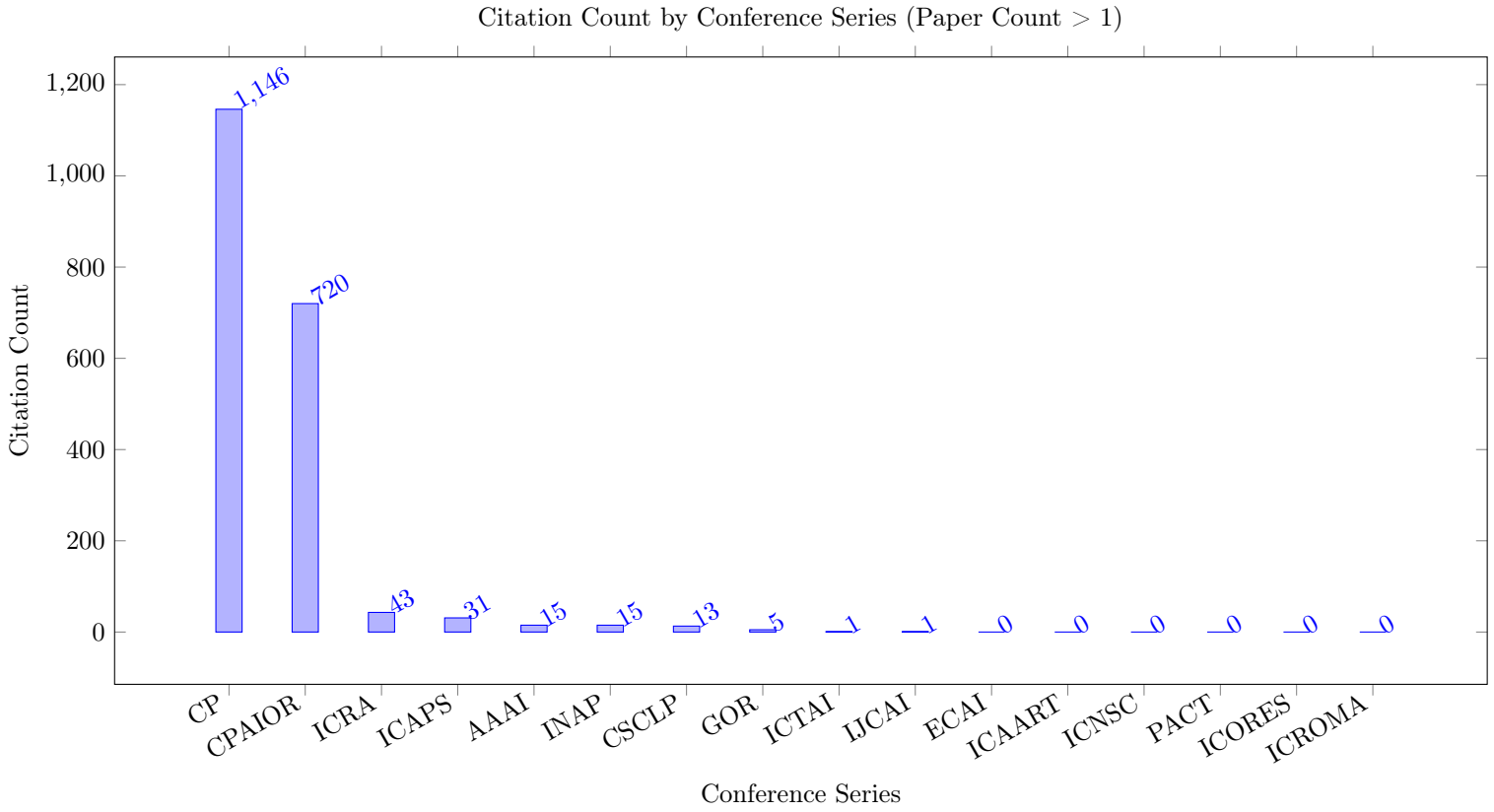
2
3
4
5
6
8
10

4 Conference Papers by Most Common Conference Series




Citation Count by Conference Series (Paper Count > 1)
Citation Count
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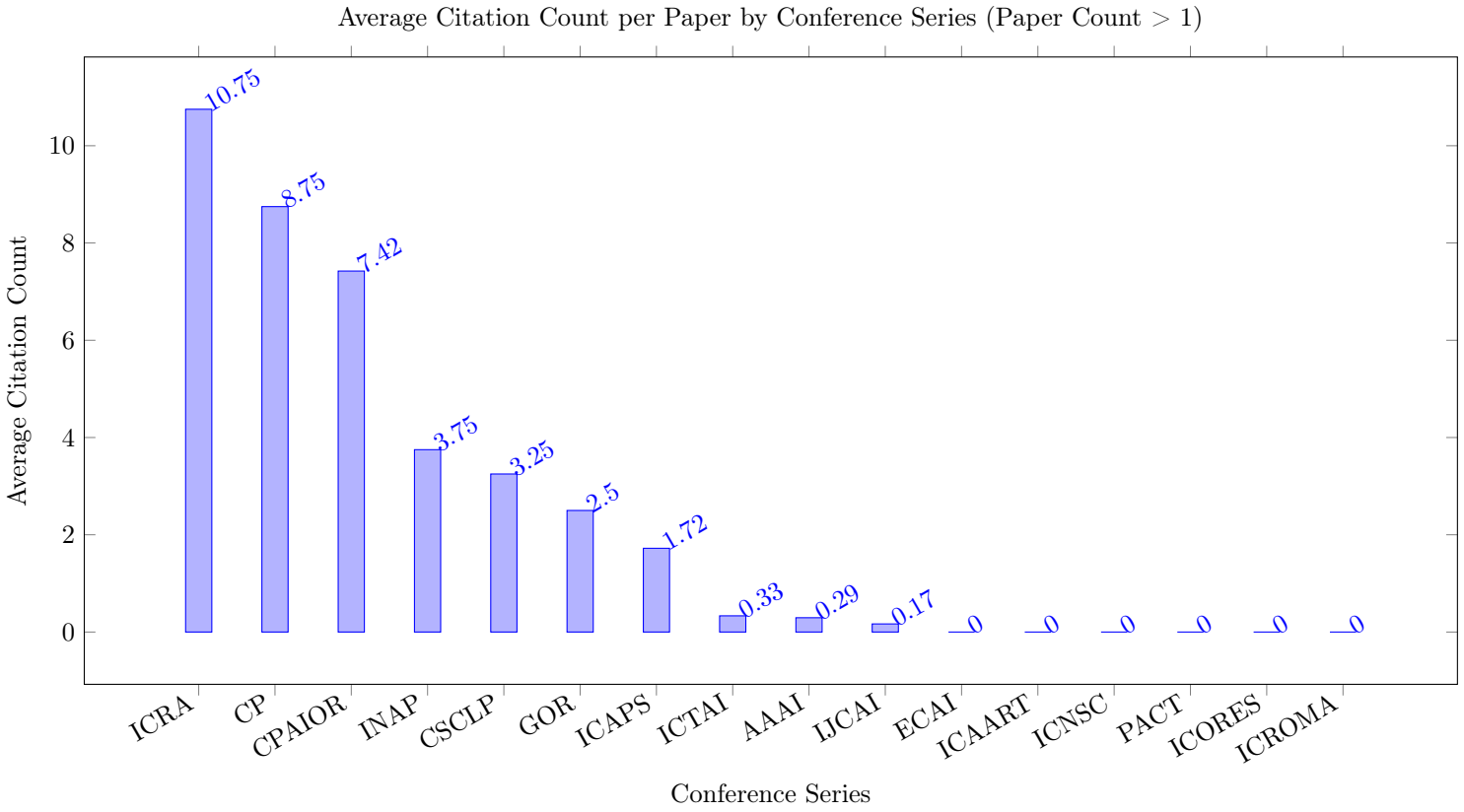
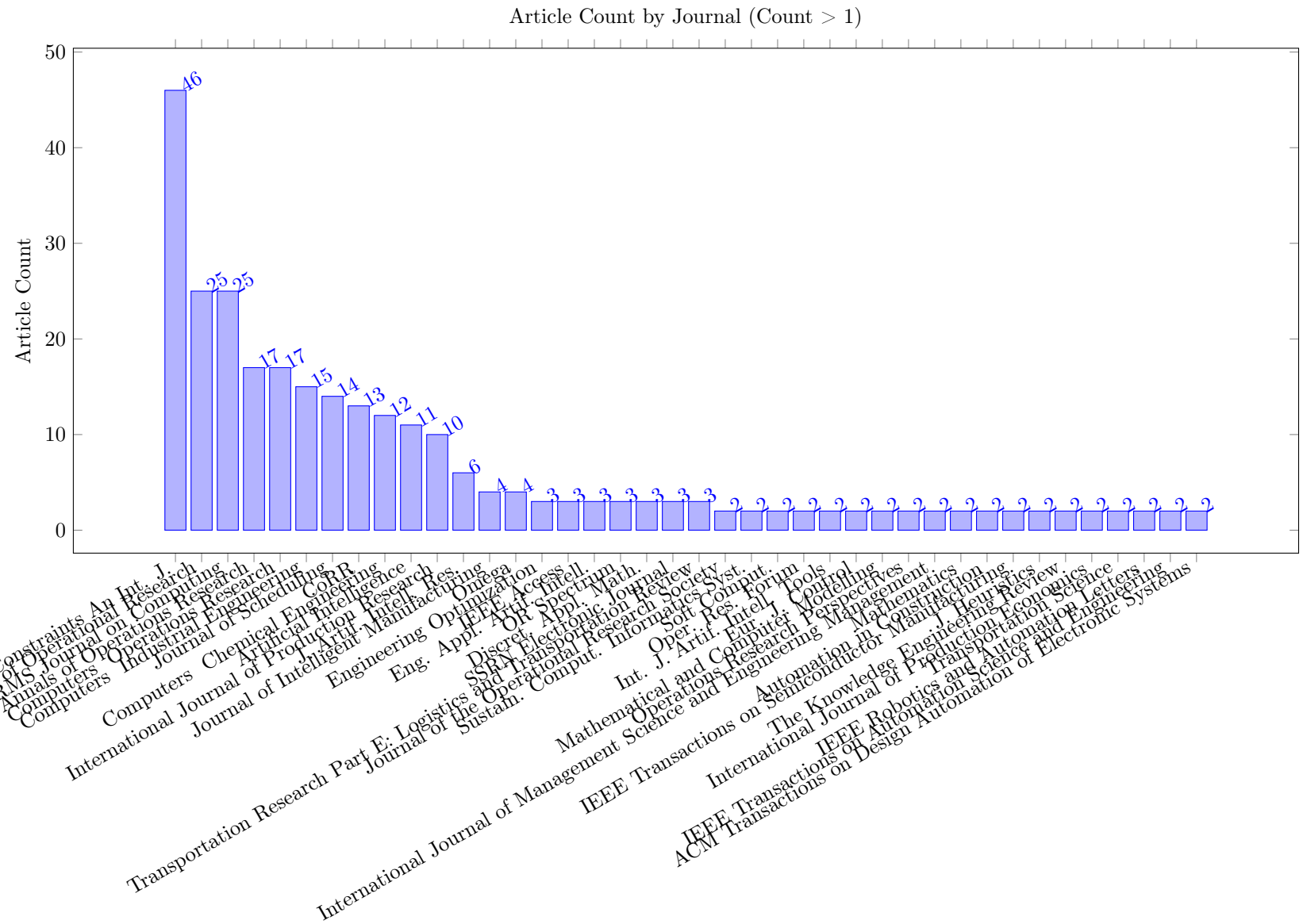
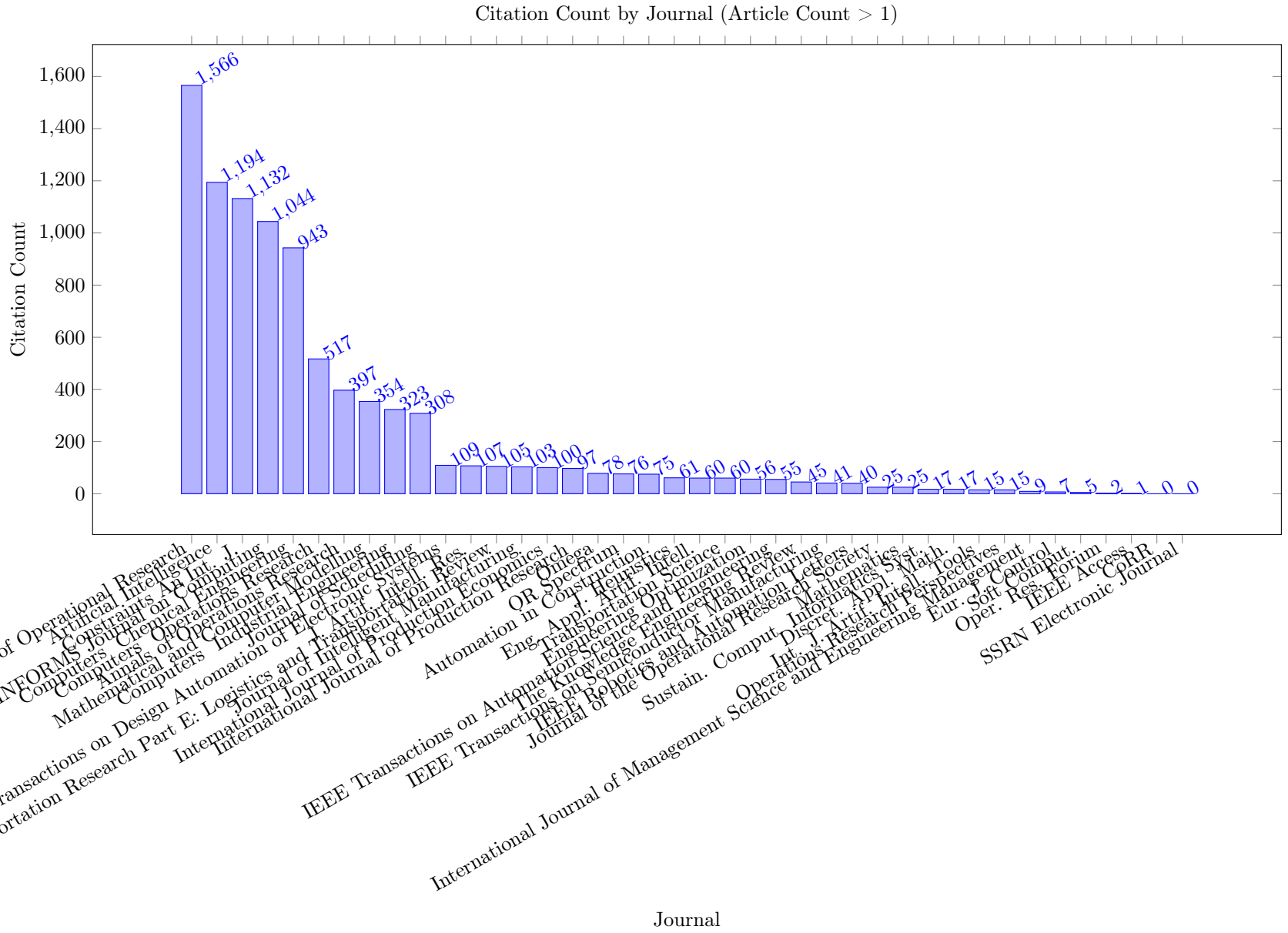
1,000
800
600
400
200
0
1,146
720
43
31
15
15
13
5
1
1
0
0
0
0
0
0
CP
CPAIOR
ICRA
ICAPS
AAAI
INAP
CSCLP
GOR
ICTAI
IJCAI
ECAI
ICAART
ICNSC
PACT
ICORES
ICROMA
Conference Series


Average Citation Count per Paper by Conference Series (Paper Count > 1)
Average Citation Count
0
2
4
6
8
10
10.75
8.75
7.42
3.75
3.25
2.5
1.72
0.33
0.29
0.17
0
0
0
0
0
0
ICRA
CP
CPAIOR
INAP
CSCLP
GOR
ICAPS
ICTAI
AAAI
IJCAI
ECAI
ICAART
ICNSC
PACT
ICORES
ICROMA
Conference Series

5 Journal Articles by Most Common Journals




Citation Count by Journal (Article Count > 1)
Citation Count
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1,400
1,200
1,000
800
600
400
200
0
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1,194
1,132
1,044
943
517
397
354
323
308
109
107
105
103
100
97
78
76
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61
60
60
56
55
45
41
40
25
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17
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9
7
5
2
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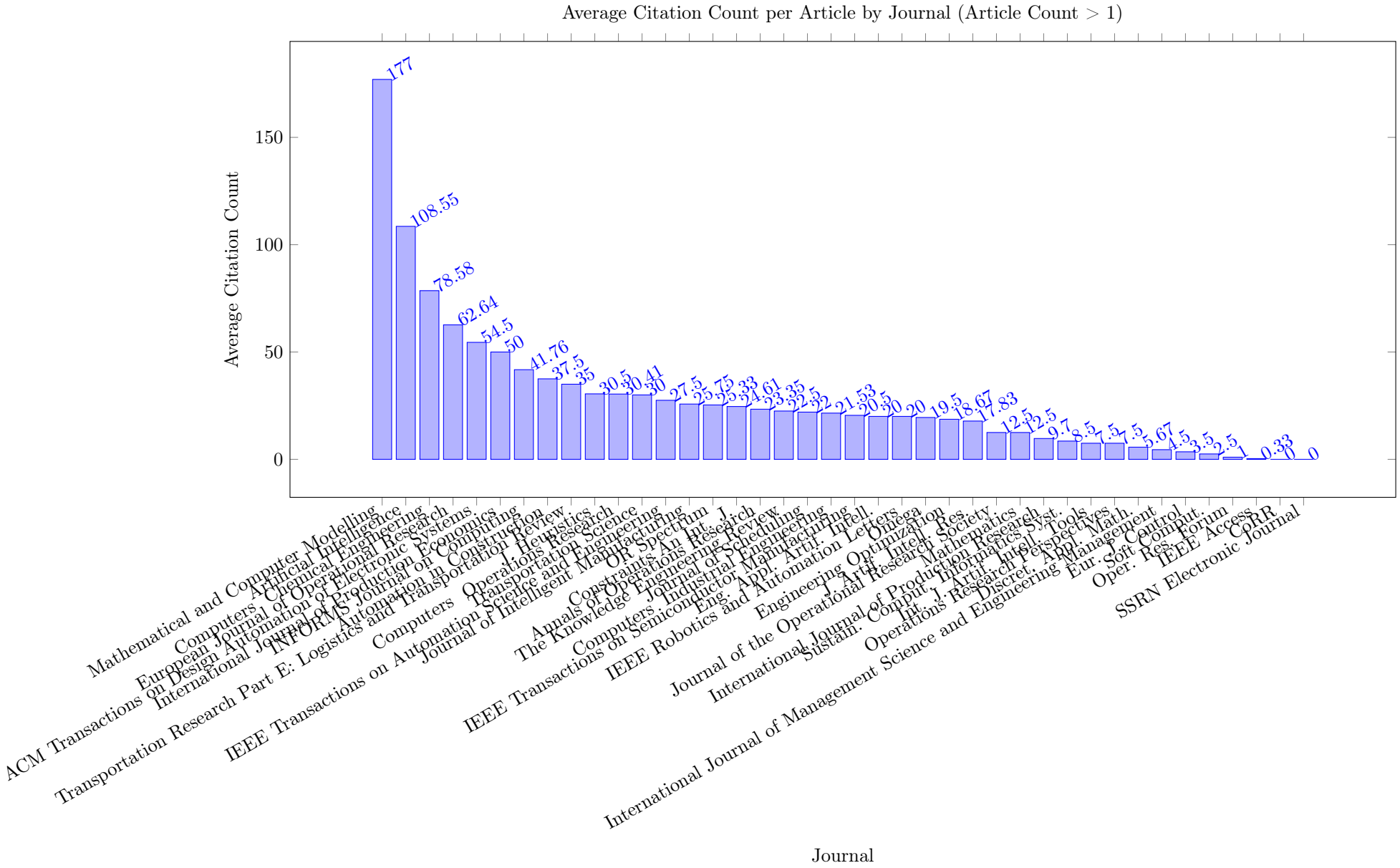
0
European Journal of Operational Research
Artificial Intelligence
Constraints An Int. J.
INFORMS Journal on Computing
Computers & Chemical Engineering
Annals of Operations Research
Mathematical and Computer Modelling
Computers & Industrial Engineering
Journal of Scheduling
ACM Transactions on Design Automation of Electronic Systems
Transportation Research Part E: Logistics and Transportation Review
Journal of Intelligent Manufacturing
International Journal of Production Economics
International Journal of Production Research
Omega
OR Spectrum
Automation in Construction
J. Heuristics
Eng. Appl. Artif. Intell.
Transportation Science
Engineering Optimization
The Knowledge Engineering Review
IEEE Transactions on Automation Science and Engineering
IEEE Transactions on Semiconductor Manufacturing
IEEE Robotics and Automation Letters
Journal of the Operational Research Society
Sustain. Comput. Informatics Syst.
Discret. Appl. Math.
Int. J. Artif. Intell. Tools
Operations Research Perspectives
Eur. J. Control
Soft Comput.
Oper. Res. Forum
IEEE Access
SSRN Electronic Journal
International Journal of Management Science and Engineering Management
Journal


Average Citation Count per Article by Journal (Article Count > 1)
Average Citation Count
0
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100
150
177
108.55
78.58
62.64
54.5
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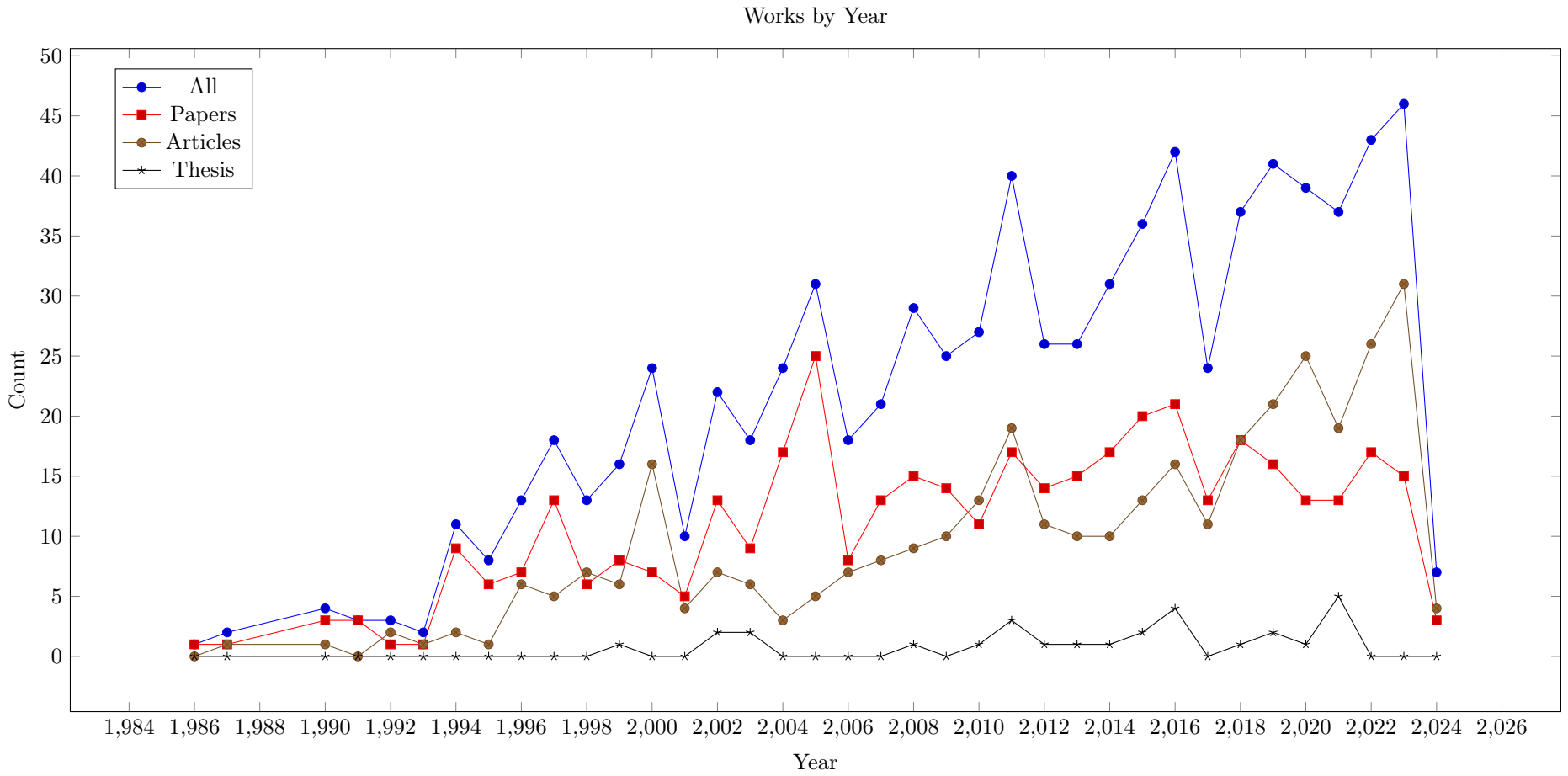
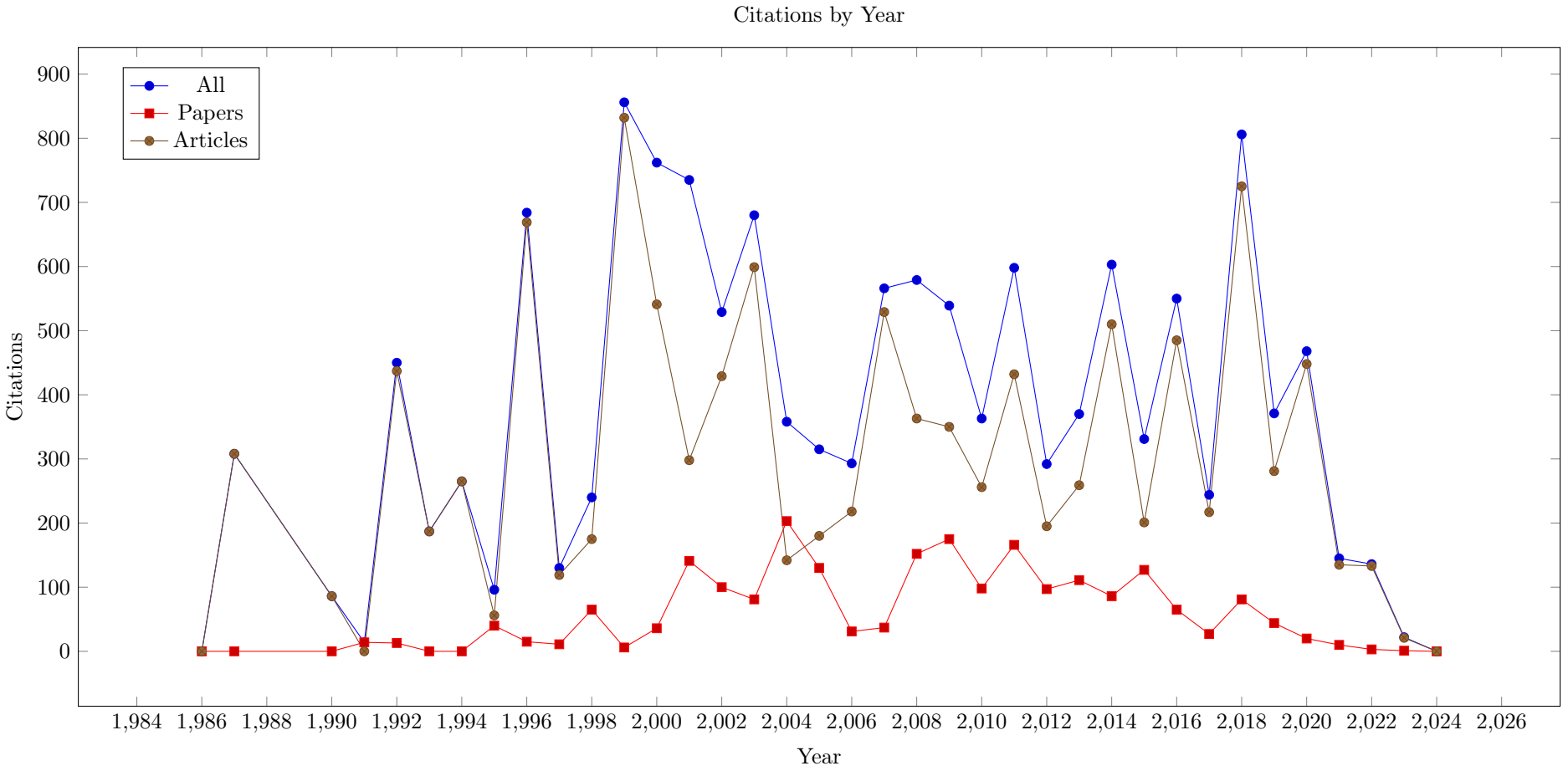
37.5
35
30.5
30.41
30
27.5
25.75
25.5
25.33
24.61
23.35
22.5
22
21.53
20.5
20
20
19.5
18.67
17.83
12.5
12.5
9.7
8.5
7.5
7.5
5.67
4.5
3.5
2.5
1
0.33
0
0
Mathematical and Computer Modelling
Artificial Intelligence
Computers
Chemical Engineering
European Journal of Operational Research
ACM Transactions on Design Automation of Electronic Systems
International Journal of Production Economics
Transportation Research Part E: Logistics and Transportation Review
INFORMS Journal on Computing
Automation in Construction
IEEE Transactions on Automation Science and Engineering
Computers & Operations Research
Transportation Science
Journal of Intelligent Manufacturing
OR Spectrum
Int. J. Heuristics
Constraints
Annals of Operations Research
The Knowledge Engineering Review
IEEE Transactions on Semiconductor Manufacturing
Journal of Scheduling
Computers & Industrial Engineering
IEEE Robotics and Automation Letters
Eng. Appl. Artif. Intell.
J. Artif. Intell. Res.
Omega
Engineering Optimization
Journal of the Operational Research Society
International Journal of Production Research
Sustain. Comput. Inform. Syst.
Int. J. Artif. Intell. Tools
Discret. Appl. Math.
Operations Research Perspectives
Eur. J. Control
Oper. Res. Forum
Soft Comput.
IEEE Access
SSRN Electronic Journal
CoRR
International Journal of Management Science and Engineering Management
Journal

6 Works by Year




Citations by Year
All
Papers
Articles
Citations
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800
700
600
500
400
300
200
100
0
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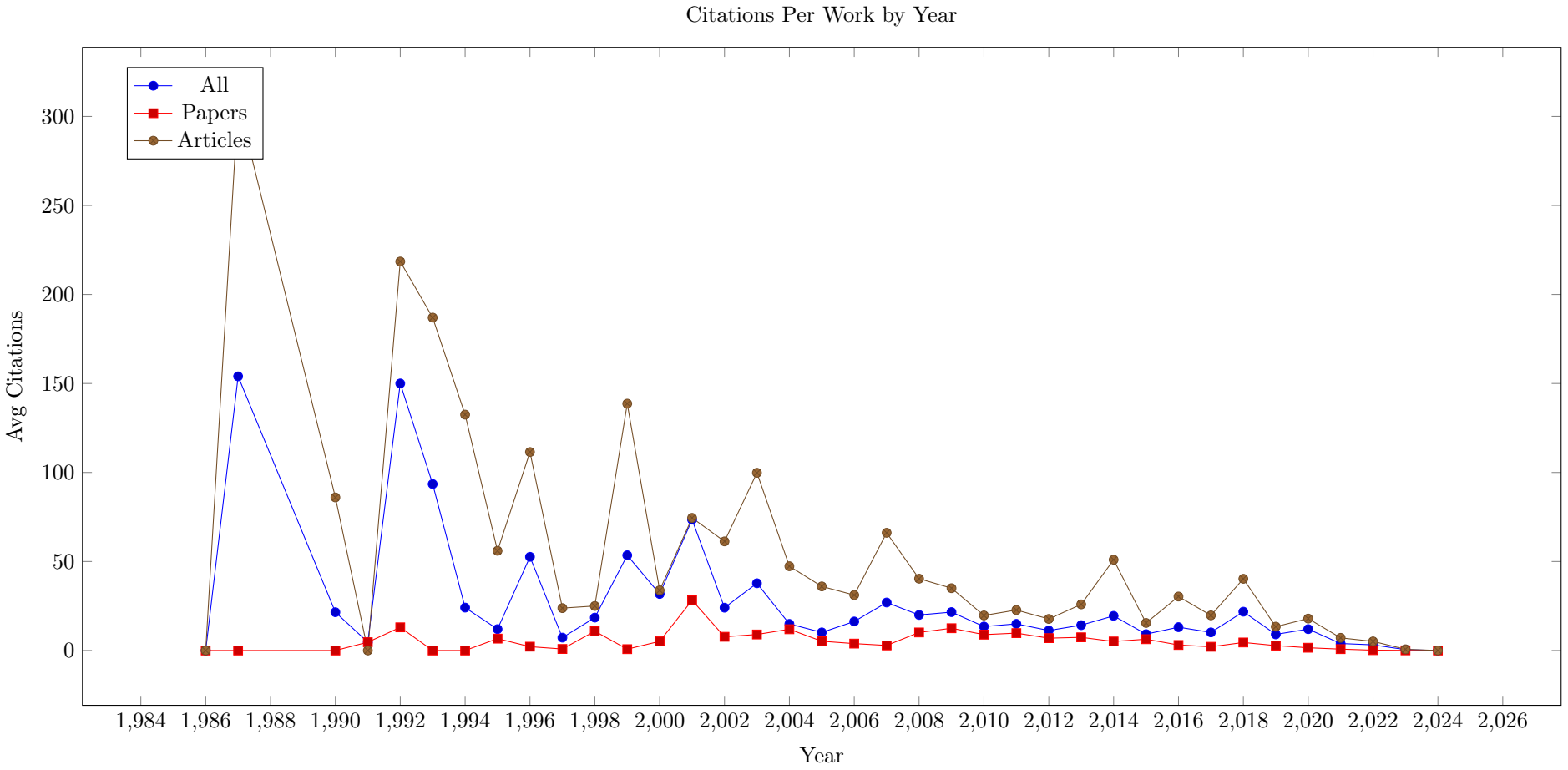
1,986
1,988
1,990
1,992
1,994
1,996
1,998
2,000
2,002
2,004
2,006
2,008
2,010
2,012
2,014
2,016
2,018
2,020
2,022
2,024
2,026
Year


Citations Per Work by Year
All
Papers
Articles
Avg Citations
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250
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150
100
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2,004
2,006
2,008
2,010
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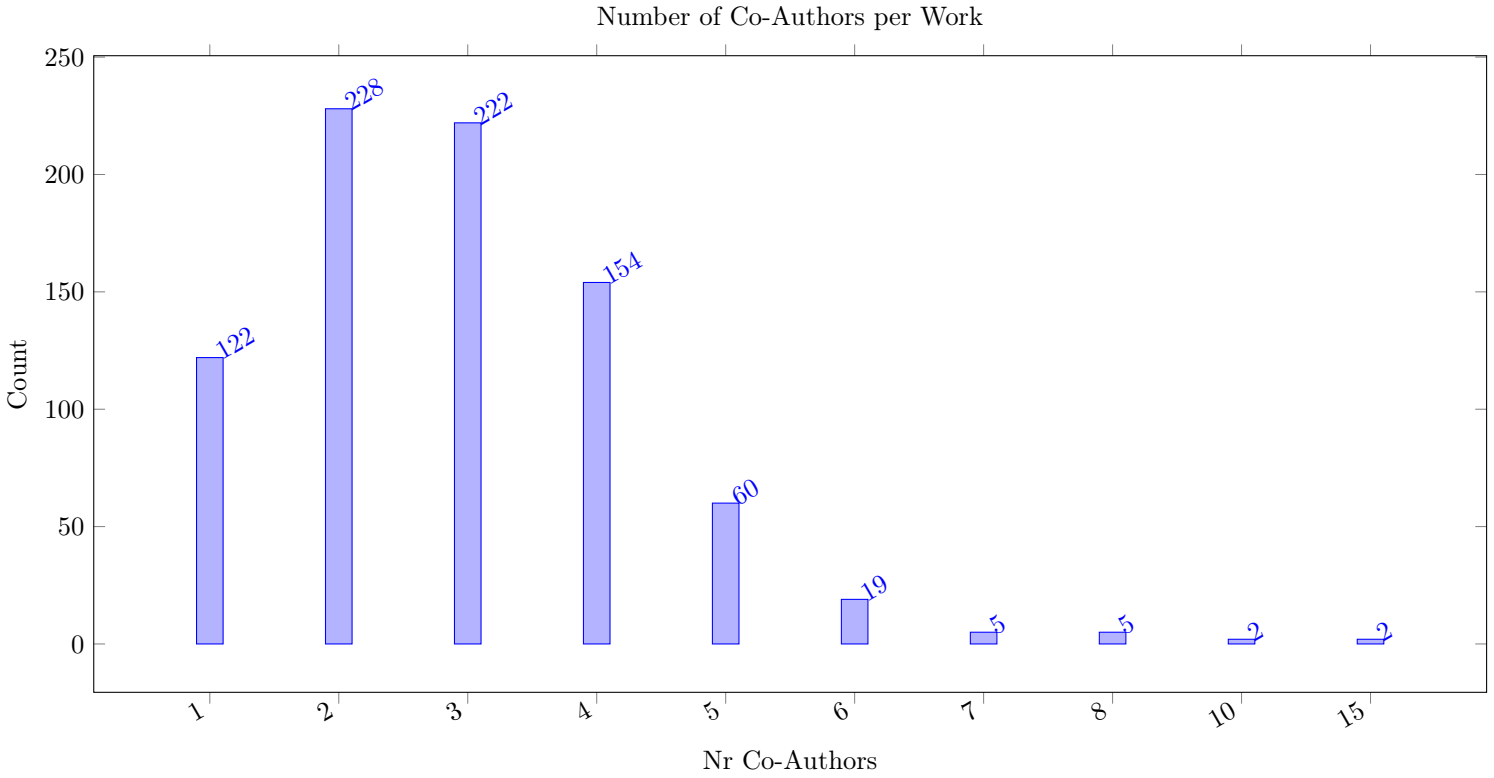
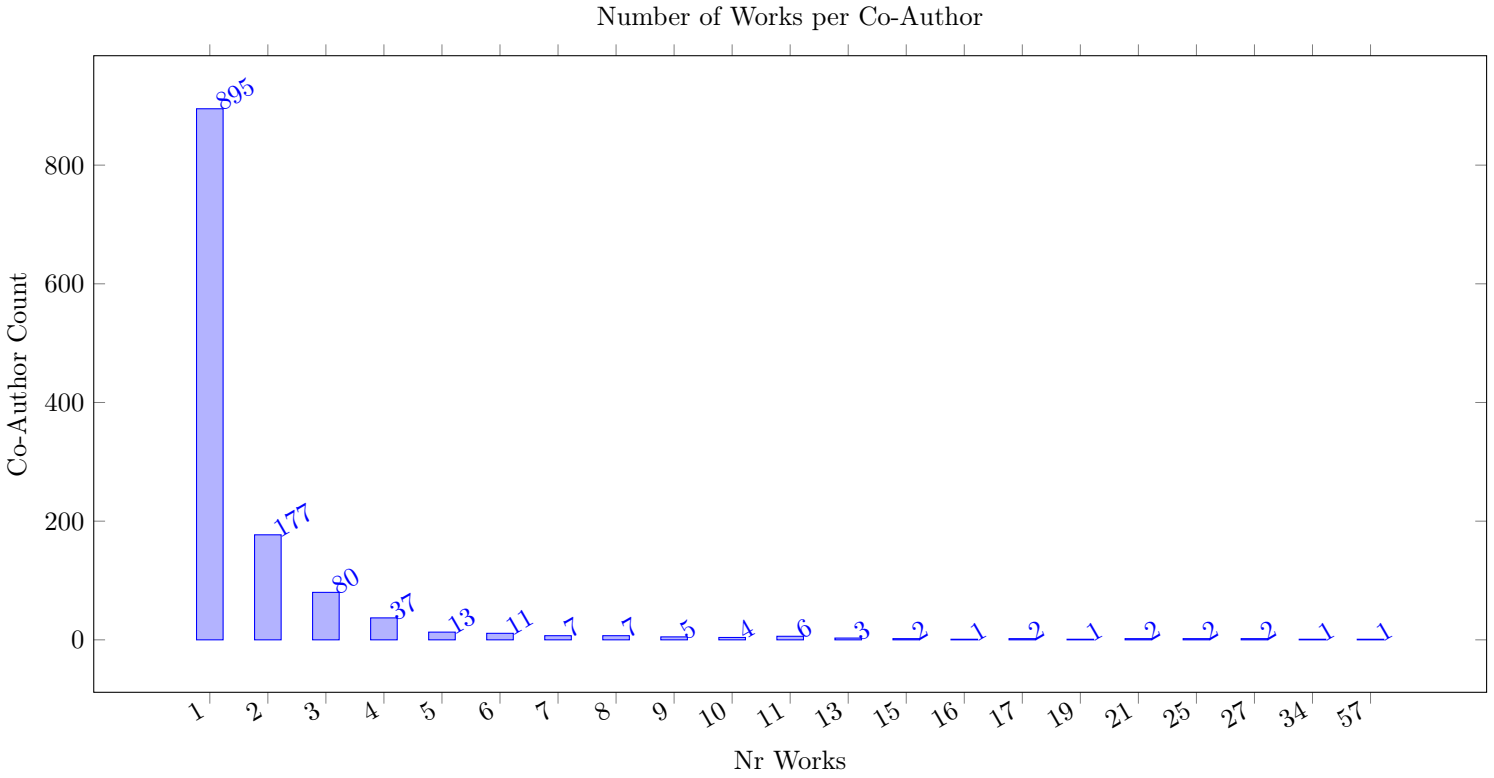
2,014
2,016
2,018
2,020
2,022
2,024
2,026
Year

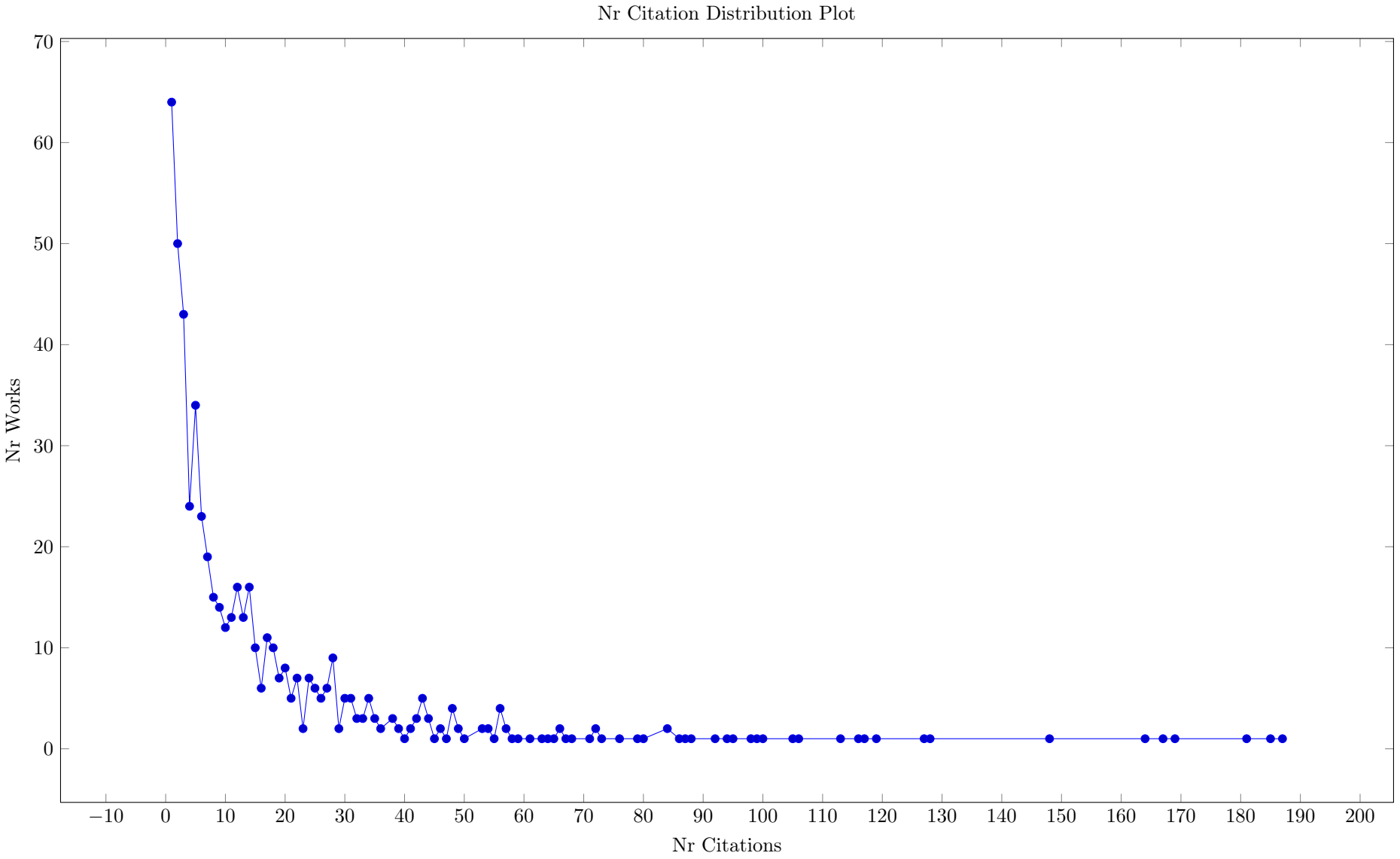
7 Number of Coauthors per Work



8 Number of Works per Author



9 Citation Distribution



10 Similarity Measures

The following distribution plot shows the similarity values between two works based on citations and references counts. If either work does not have citation and reference values, then the similarity is set to NaN. The total similarity count is the sum of the similarity for citations and for references. As value we compute the ratio of shared references (citations) to the sum of individual references (citations), multiplied by two. So both the citation and reference similarity range between zero and one, and the sum ranges between zero and two. High values are exceedingly rare, as they require both works to be citing the same papers, and being cited by the same papers.A larger values indicates that items are more similar according to this measure. In the plot we group values into 0.1 wide value bins, so an entry for 0.2 includes values from 0.15 to 0.25.

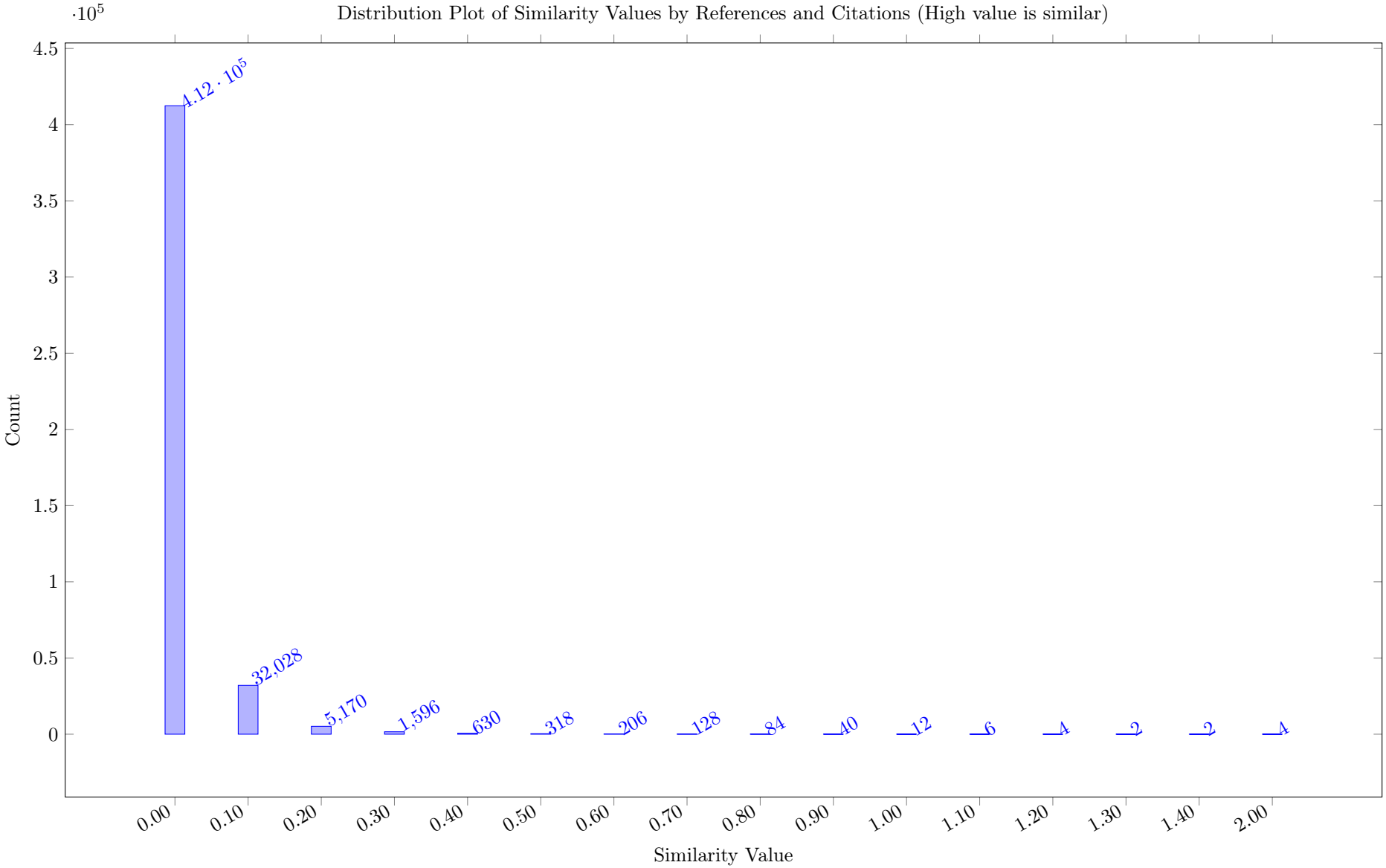
We observe that high values of this similarity are often found for two works by the same authors that are close in time, where we assumes that the bibliography is based on the same literature survey.

Table 6: Similarity Measure (*1000) based on References and Citations (high = similar)

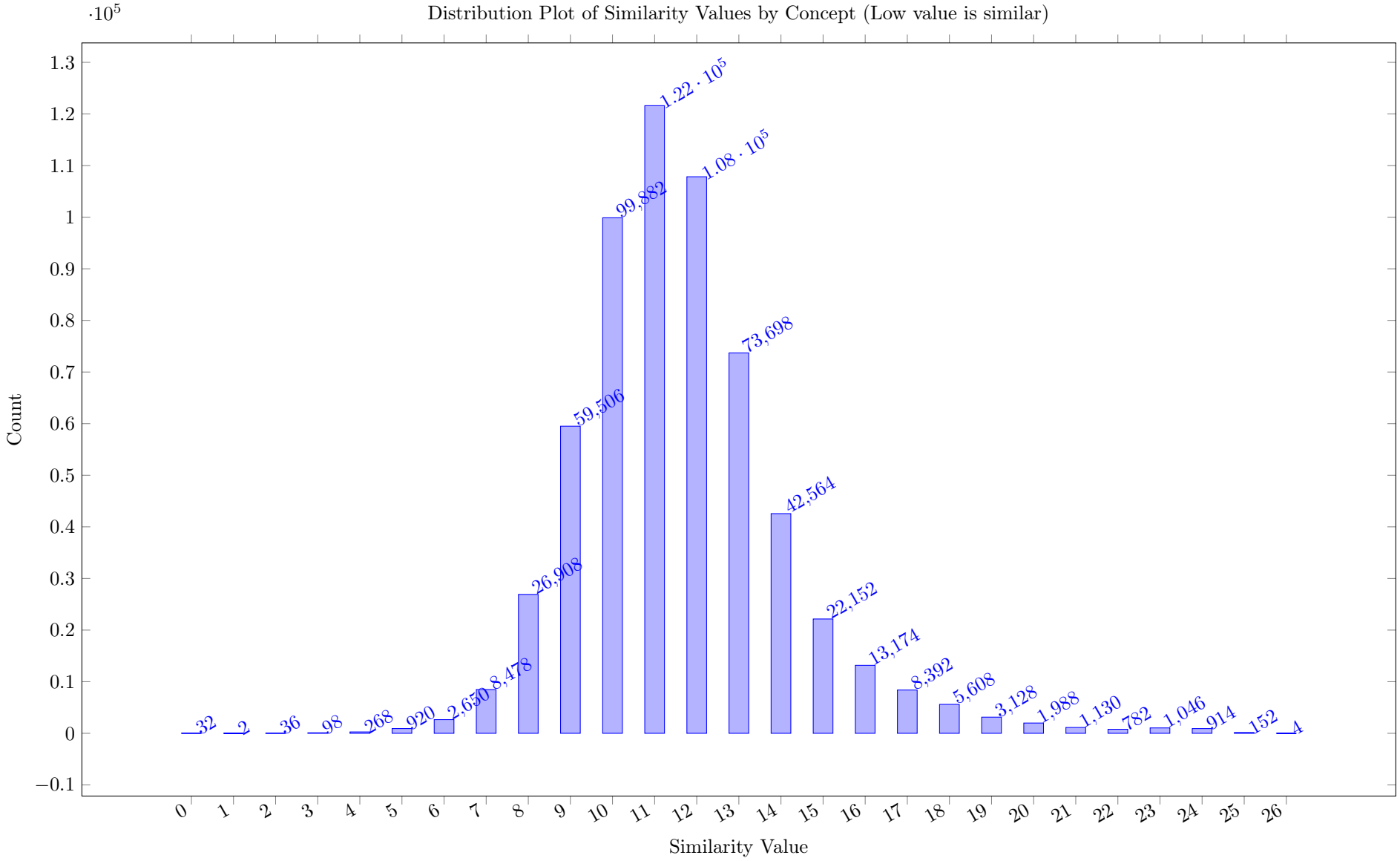
From/To	Total	Hooker05	OuelletQ13	KameugneFSN14	ChuX05	SchuttW10	CireCH16	Beck10	OuelletQ18	SchuttFS13a	CobanH11	CireCH13	Hooker05a	KameugneF13	Hooker07	AronHY2004	KameugneFSN11	Wolf03	HeinzKB13	Hooker06	GayHS15a	LetortCB15	MercierH08	Other
Total		34,713	34,116	33,220	31,683	31,405	31,065	30,417	30,133	29,232	28,550	27,722	27,690	27,468	27,383	26,563	25,933	25,924	25,878	25,787	25,673	25,478	25,425	
Hooker05	34,713	0	80	95	840	80	548	638	74	53	497	468	1,020	133	859	483	100	111	257	776	87	80	125	27,309
OuelletQ13	34,116	80	0	917	74	757	57	80	800	605	39	0	0	778	0	54	627	190	138	0	774	571	333	27,242
KameugneFSN14	33,220	95	917	0	87	732	65	95	872	555	43	0	0	595	0	61	632	118	80	0	455	417	477	26,924
ChuX05	31,683	840	74	87	0	74	483	521	69	50	508	639	702	118	593	347	91	100	214	712	80	74	111	25,196
SchuttW10	31,405	80	757	732	74	0	57	80	611	596	39	0	0	754	0	54	735	179	69	0	231	286	566	25,505
CireCH16	31,065	548	57	65	483	57	0	551	54	42	897	838	452	80	632	227	67	71	417	529	61	57	77	24,803
Beck10	30,417	638	80	95	521	80	551	0	74	53	576	476	503	133	387	351	100	111	154	491	87	80	125	24,751
OuelletQ18	30,133	74	800	872	69	611	54	74	0	510	38	0	0	800	0	51	554	174	65	0	500	333	253	24,301
SchuttFS13a	29,232	53	605	555	50	596	42	53	510	0	31	0	0	360	0	40	296	123	190	0	308	293	293	24,834
CobanH11	28,550	497	39	43	508	39	897	576	38	31	0	835	431	49	659	267	43	45	192	743	41	39	48	22,490
CireCH13	27,722	468	0	0	639	0	838	476	0	0	835	0	485	0	688	323	0	0	316	737	0	0	0	21,917
Hooker05a	27,690	1,020	0	0	702	0	452	503	0	0	431	485	0	0	725	494	0	0	160	726	0	0	0	21,992
KameugneF13	27,468	133	778	595	118	754	80	133	800	360	49	0	0	0	0	74	769	182	105	0	125	222	433	21,758
Hooker07	27,383	859	0	0	593	0	632	387	0	0	659	688	725	0	0	326	0	0	198	860	0	0	0	21,456
AronHY2004	26,563	483	54	61	347	54	227	351	51	40	267	323	494	74	326	0	63	67	158	337	57	54	71	22,604
KameugneFSN11	25,933	100	627	632	91	735	67	100	554	296	43	0	0	769	0	63	0	125	83	0	286	261	440	20,661
Wolf03	25,924	111	190	118	100	179	71	111	174	123	45	0	0	182	0	67	125	0	91	0	211	286	167	23,573
HeinzKB13	25,878	257	138	80	214	69	417	154	65	190	192	316	160	105	198	158	83	91	0	143	74	69	100	22,605
Hooker06	25,787	776	0	0	712	0	529	491	0	0	743	737	726	0	860	337	0	0	143	0	0	0	0	19,733
GayHS15a	25,673	87	774	455	80	231	61	87	500	308	41	0	0	125	0	57	286	211	74	0	0	462	118	21,716
LetortCB15	25,478	80	571	417	74	286	57	80	333	293	39	0	0	222	0	54	261	286	69	0	462	0	105	21,789
MercierH08	25,425	125	333	477	111	566	77	125	253	293	48	0	0	433	0	71	440	167	100	0	118	105	0	21,583
Hooker04	25,081	893	39	0	622	38	370	469	0	34	299	313	1,114	0	662	520	0	0	208	649	0	0	28	18,823
Vilim09	24,877	155	604	608	118	860	80	133	429	287	49	0	0	694	0	74	837	237	164	0	125	111	643	18,669
SchuttFSW11	24,323	0	303	367	0	493	0	79	237	646	0	0	46	148	25	0	188	29	30	0	204	216	135	21,177
CobanH10	24,265	378	0	0	364	0	617	471	0	0	478	667	572	0	431	268	0	0	167	669	0	0	0	19,183
GrimesH15	24,018	38	36	78	37	36	32	38	35	29	26	0	0	89	10	31	80	208	36	0	38	73	87	22,981
LetortBC12	23,838	0	851	689	0	541	0	87	381	468	0	0	0	250	0	0	415	105	0	0	507	615	280	18,649
KameugneFGOQ18	23,703	87	538	455	80	374	61	87	714	359	41	0	0	411	0	57	536	105	74	0	667	308	178	18,571
BeldiceanuC02	23,615	100	352	313	91	261	67	100	314	224	43	0	63	308	0	63	311	386	167	0	243	261	327	19,621
Wolf05	23,159	105	273	111	95	182	69	105	167	57	44	0	0	167	0	65	118	800	87	0	200	273	154	20,087
LetortCB13	23,144	95	500	400	87	333	65	95	231	270	43	0	0	286	0	61	516	235	80	0	364	833	133	18,517
SimonisH11	23,085	100	522	316	91	261	67	100	320	167	43	0	0	308	0	63	333	250	167	0	286	348	143	19,200
SchuttFSW15	23,042	51	286	211	49	190	41	51	227	647	31	0	0	125	0	39	162	57	186	0	200	190	61	20,238
Colombani96	22,980	0	105	267	0	0	0	0	95	63	0	0	0	0	0	0	143	467	0	0	118	105	256	21,361
GrimesHM09	22,862	87	77	91	80	77	61	87	71	51	41	0	0	125	10	57	95	211	74	0	83	77	118	21,289
YunesAH10	22,745	290	38	42	262	38	321	386	37	31	394	405	385	48	308	621	43	44	134	384	40	38	47	18,409
SadykovW06	22,658	341	100	125	279	100	148	267	91	61	161	111	258	200	186	171	133	154	95	199	111	100	182	19,085
DorndorfHP99	22,311	0	59	133	0	0	0	0	56	85	0	0	0	0	0	0	69	148	0	0	63	59	160	21,479
Vilim09a	21,928	158	382	286	118	675	80	133	505	307	49	0	47	711	10	74	562	182	105	63	125	111	400	16,845
VilimBC05	21,596	147	105	267	111	105	77	125	95	111	48	0	39	222	10	71	286	229	100	50	118	105	400	18,775
CambazardHDJT04	21,544	492	0	0	438	0	260	327	0	0	373	333	602	0	371	345	0	0	143	462	0	0	0	17,398
Other		23,792	22,072	22,165	22,274	20,941	22,387	21,611	20,296	20,937	20,327	20,088	18,866	17,666	19,433	20,024	15,834	19,726	20,588	17,257	18,224	17,966	17,851	

Table 7: Similarity Measure based on Extracted Concepts (low = similar)

From/To	Total	Petropoulos23	ZarandiASC20	Groleaz21	Dejemeppe16	Malapert11	Baptiste02	Froger16	Godet21a	Siala15a	Lombardi10	Lunardi20	Astrand21	LaborieRSV18	Lemos21	Siala15	Schutt11	NaderiRR23	Fahimi16	LacknerMMWW23	IsikYA23	KoehlerBFFHPSSS21	HartmannB10	HarjunkoskiMBC14	HookerH17
Total		18,300	17,231	15,428	15,305	14,632	14,534	13,802	13,781	13,697	13,614	13,287	12,979	12,882	12,863	12,780	12,640	12,571	12,567	12,419	12,193	12,184	12,007	11,971	11,943
Petropoulos23	18,300	0	22	23	24	25	26	22	24	26	22	23	21	22	21	25	24	24	24	24	23	23	22	21	23
ZarandiASC20	17,231	22	0	19	20	22	19	22	22	24	21	18	18	22	22	24	22	21	21	23	18	23	19	21	22
Groleaz21	15,428	23	19	0	18	19	17	21	19	21	18	17	16	18	21	21	19	16	18	19	17	20	18	18	21
Dejemeppe16	15,305	24	20	18	0	18	18	22	19	20	18	18	18	19	20	20	17	20	16	19	18	20	17	19	19
Malapert11	14,632	25	22	19	18	0	17	21	18	19	19	19	18	19	21	19	16	19	15	20	19	19	19	19	19
Baptiste02	14,534	26	19	17	18	17	0	22	17	20	16	19	17	19	22	20	16	18	15	20	18	20	17	20	18
Froger16	13,802	22	22	21	22	21	22	0	21	22	19	18	18	20	17	22	20	20	20	19	18	20	19	17	18
Godet21a	13,781	24	22	19	19	18	17	21	0	18	18	19	18	18	19	18	16	18	16	19	19	18	18	20	18
Siala15a	13,697	26	24	21	20	19	20	22	18	0	19	20	19	19	19	8	17	19	17	20	20	19	20	19	17
Lombardi10	13,614	22	21	18	18	19	16	19	18	19	0	19	16	18	19	20	15	19	15	20	18	19	16	17	16
Lunardi20	13,287	23	18	17	18	19	19	18	19	20	19	0	14	17	18	19	19	15	18	17	13	18	17	17	19
Astrand21	12,979	21	18	16	18	18	17	18	18	19	16	14	0	16	17	19	16	17	16	19	15	18	16	15	18
LaborieRSV18	12,882	22	22	18	19	19	19	20	18	19	18	17	16	0	19	18	18	16	17	17	17	17	17	16	18
Lemos21	12,863	21	22	21	20	21	22	17	19	19	19	18	17	19	0	19	19	19	19	18	18	17	19	17	18
Siala15	12,780	25	24	21	20	19	20	22	18	8	20	19	19	18	19	0	18	18	17	19	19	18	18	19	17
Schutt11	12,640	24	22	19	17	16	16	20	16	17	15	19	16	18	19	18	0	18	14	19	18	19	16	19	16
NaderiRR23	12,571	24	21	16	20	19	18	20	18	19	19	15	17	16	19	18	18	0	17	16	14	17	17	17	18
Fahimi16	12,567	24	21	18	16	15	15	20	16	17	15	18	16	17	19	17	14	17	0	19	18	18	17	17	16
LacknerMMWW23	12,419	24	23	19	19	20	20	19	19	20	20	17	19	17	18	19	19	16	19	0	16	16	17	17	18
IsikYA23	12,193	23	18	17	18	19	18	18	19	20	18	13	15	17	18	19	18	14	18	16	0	17	16	17	18
KoehlerBFFHPSSS21	12,184	23	23	20	20	19	20	20	18	19	19	18	18	17	17	18	19	17	18	16	17	0	19	17	18
HartmannB10	12,007	22	19	18	17	19	17	19	18	20	16	17	16	17	19	18	16	17	17	17	16	19	0	16	18
HarjunkoskiMBC14	11,971	21	21	18	19	19	20	17	20	19	17	17	15	16	17	19	19	17	17	17	17	17	16	0	17
HookerH17	11,943	23	22	21	19	19	18	18	18	17	16	19	18	18	18	17	16	18	16	18	18	18	18	17	0
ArmstrongGOS21	11,866	25	22	20	20	18	20	20	19	20	20	15	17	17	19	19	18	17	18	16	15	16	18	18	18
HartmannB22	11,865	21	18	18	18	20	18	18	19	21	16	17	16	17	18	20	17	17	18	18	16	19	10	16	18
LacknerMMWW21	11,813	25	23	19	19	20	20	19	19	20	20	17	19	17	19	19	19	16	19	6	15	15	17	17	18
Beck99	11,729	22	20	18	17	17	16	19	17	18	14	17	15	16	17	18	14	18	14	18	16	17	16	16	15
PrataAN23	11,700	23	17	16	17	18	16	18	18	20	17	15	15	17	19	18	18	14	16	16	13	18	14	15	17
ColT22	11,605	24	19	17	17	18	16	19	17	18	18	14	15	15	17	18	17	15	16	14	14	15	17	16	16
GrimesH15	11,419	24	19	16	16	16	16	19	17	16	17	15	15	15	18	16	16	12	14	16	13	17	15	16	17
MengZRZL20	11,362	23	19	17	19	18	18	19	19	19	19	13	15	16	18	18	18	12	18	15	10	17	16	16	18
AbreuNP23	11,243	24	21	18	19	18	18	19	19	19	19	15	16	17	18	18	18	13	18	17	13	17	16	17	18
YunusogluY22	11,180	23	19	18	18	18	18	18	18	19	18	13	15	16	17	18	18	14	18	15	11	17	13	15	17
Kameugne14	11,141	25	23	20	20	16	17	19	17	17	17	20	17	17	18	17	14	18	13	19	18	18	17	18	15
Caballero19	11,071	24	22	19	18	19	17	20	15	16	16	19	17	17	17	16	12	17	15	18	17	17	16	18	15
WinterMMW22	11,030	24	23	19	20	21	20	18	19	20	19	16	17	17	17	19	19	14	19	14	15	17	17	16	18
MilanoW09	11,010	23	22	19	19	19	19	17	18	18	17	18	17	17	17	18	16	17	16	17	17	17	17	15	13
MengLZB21	10,995	24	20	19	20	19	19	19	20	20	19	15	16	16	18	18	19	14	18	15	11	17	16	16	17
BartakSR10	10,992	24	20	17	17	16	14	19	15	18	15	16	15	17	18	17	15	15	13	17	16	16	15	16	15
AbreuN22	10,980	23	19	17	18	17	18	17	19	19	18	14	15	17	17	18	17	13	17	16	12	17	15	16	17
AbreuPNF23	10,938	22	19	17	18	18	17	17	18	19	18	14	15	16	17	18	16	13	16	16	13	17	14	16	17
Nattaf16	10,938	24	22	19	20	18	17	18	17	18	17	17	17	17	18	17	16	16	16	17	15	17	16	18	16
BlazewiczDP96	10,924	23	19	17	17	17	15	18	16	18	16	16	14	17	18	17	15	16	14	17	15	16	14	16	16
LombardiM12	10,912	22	20	17	17	18	16	18	16	18	13	17	14	14	18	17	14	15	14	18	16	17	13	15	15
Dominey09	10,875	22	22	19	18	17	16	18	17	17	16	19	16	17	17	17	13	17	14	18	17	17	17	17	13
MejiaY20	10,869	24	20	18	19	18	18	18	18	19	19	14	16	18	18	18	17	14	17	16	13	17	15	17	17
GuoZ23	10,809	21	23	21	21	21	21	18	20	20	19	18	18	17	16	19	19	16	19	17	17	16	17	15	16
Zahout21	10,772	22	20	18	19	19	18	18	17	19	17	17	17	17	16	18	17	16	17	16	15	17	15	17	17
JuvinHHL23	10,761	25	22	18	18	17	16	19	15	16	17	16	17	16	18	15	15	14	14	17	16	16	17	17	16
BockmayrH05	10,740	24	23	20	18	16	18	18	17	17	17	19	18	16	17	16	15	17	15	17	17	16	17	15	13


Distribution Plot of Similarity Values by References and Citations (High value is similar)
$\cdot 10^5$
Count
Similarity Value
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
$4.12 \cdot 10^5$
32,028
5,170
1,596
630
318
206
128
84
40
12
6
4
2
2
4
0.00
0.10
0.20
0.30
0.40
0.50
0.60
0.70
0.80
0.90
1.00
1.10
1.20
1.30
1.40
2.00

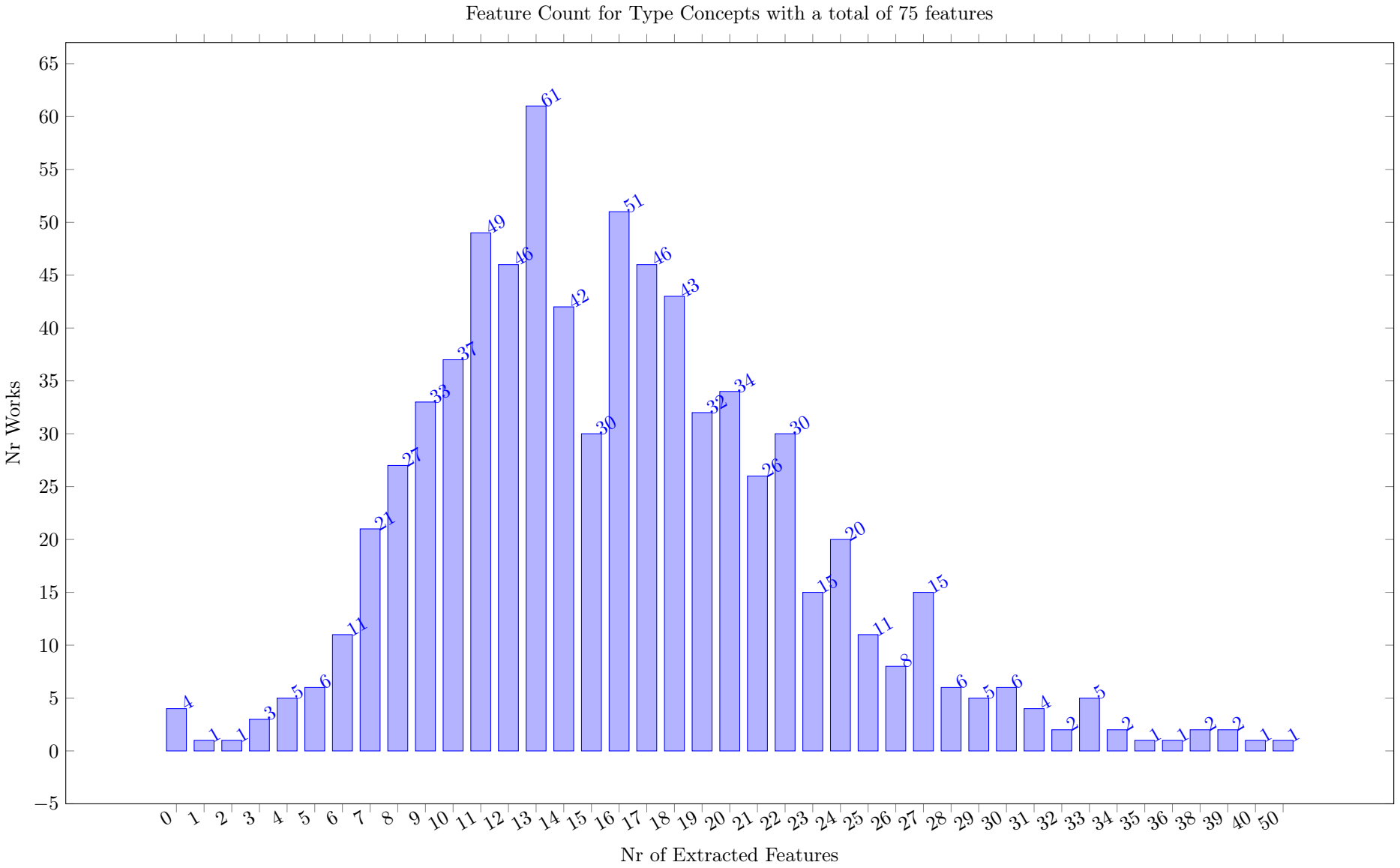
The similarity by concept uses the Euclidean distance between the feature vectors for two works. We translate the MatchLevel for each Concept into a linear scale, and then calculate the distances as the square root of the sum of squared differences for each feature. The distribution plot below rounds the distances to integer values. Similarity values of this type are only calculated when both works have a local copy, from which we extract the features. If either work does not have a local copy, the similarity is set to be NaN.

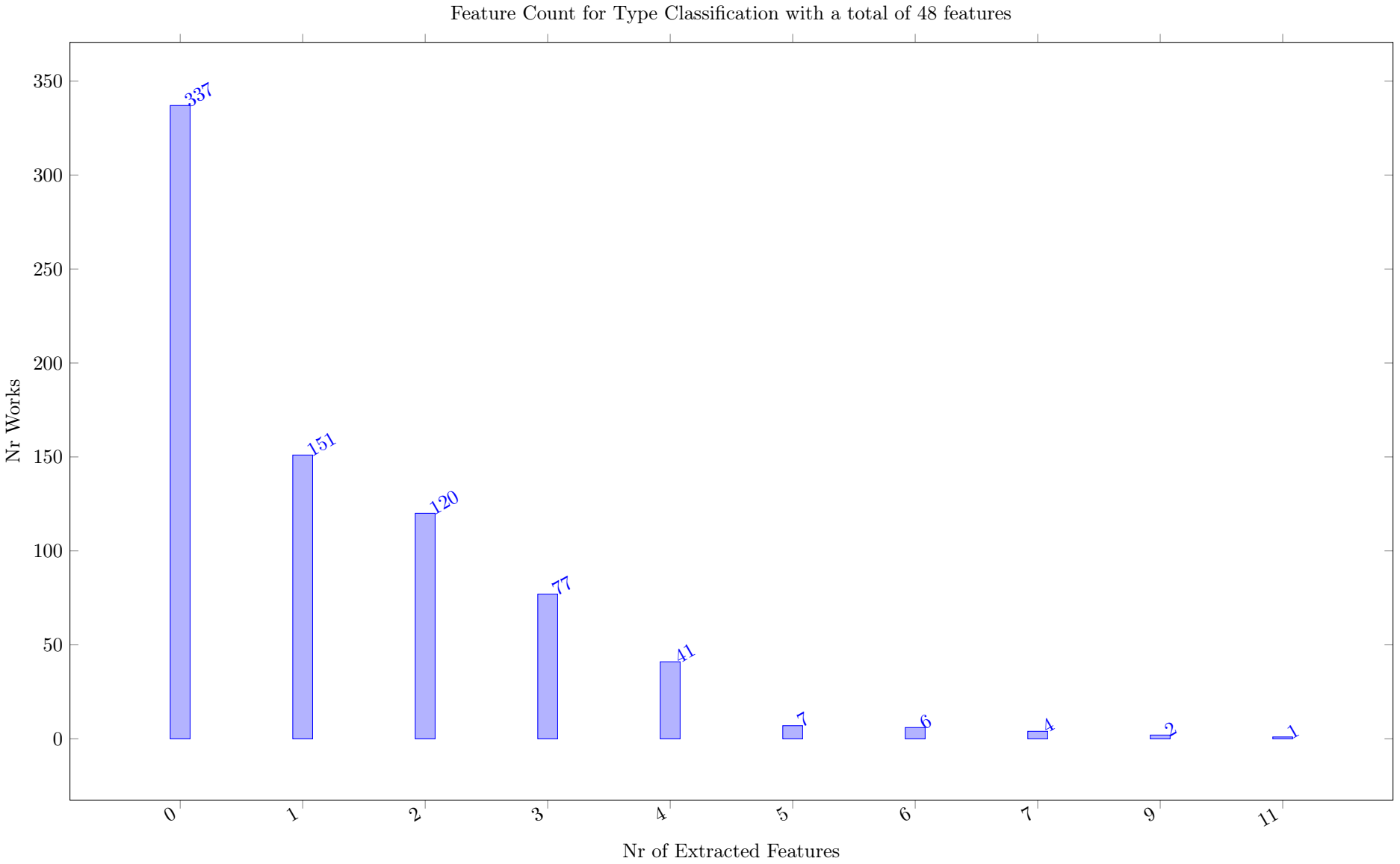

Distribution Plot of Similarity Values by Concept (Low value is similar)
$\cdot 10^5$
Count
Similarity Value
1.3
1.2
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
−0.1
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26
32
2
36
98
268
920
2,650
8,478
26,908
59,506
99,882
$1.22 \cdot 10^5$
$1.08 \cdot 10^5$
73,698
42,564
22,152
13,174
8,392
5,608
3,128
1,988
1,130
782
1,046
914
152
4

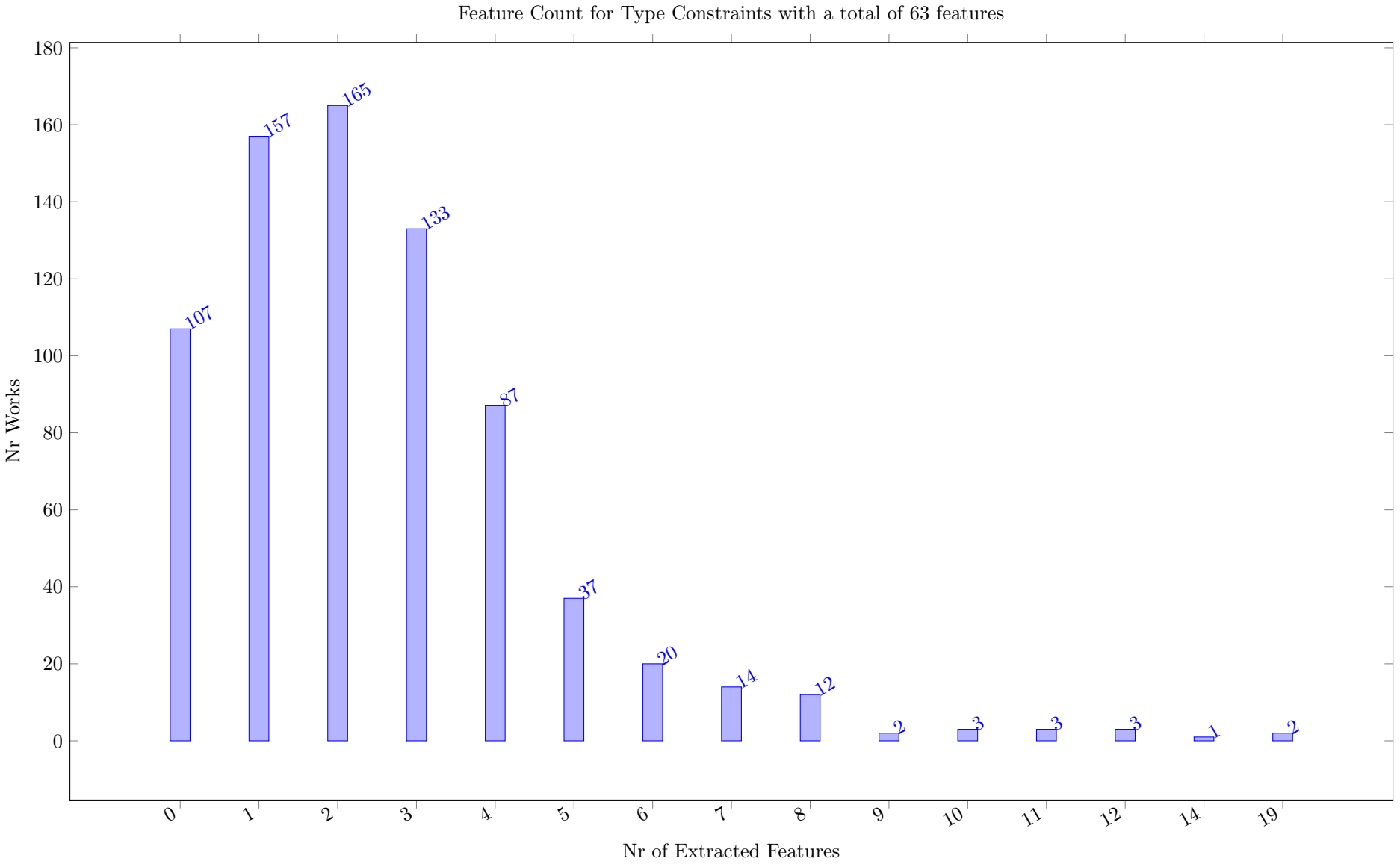
11 Concept Distribution

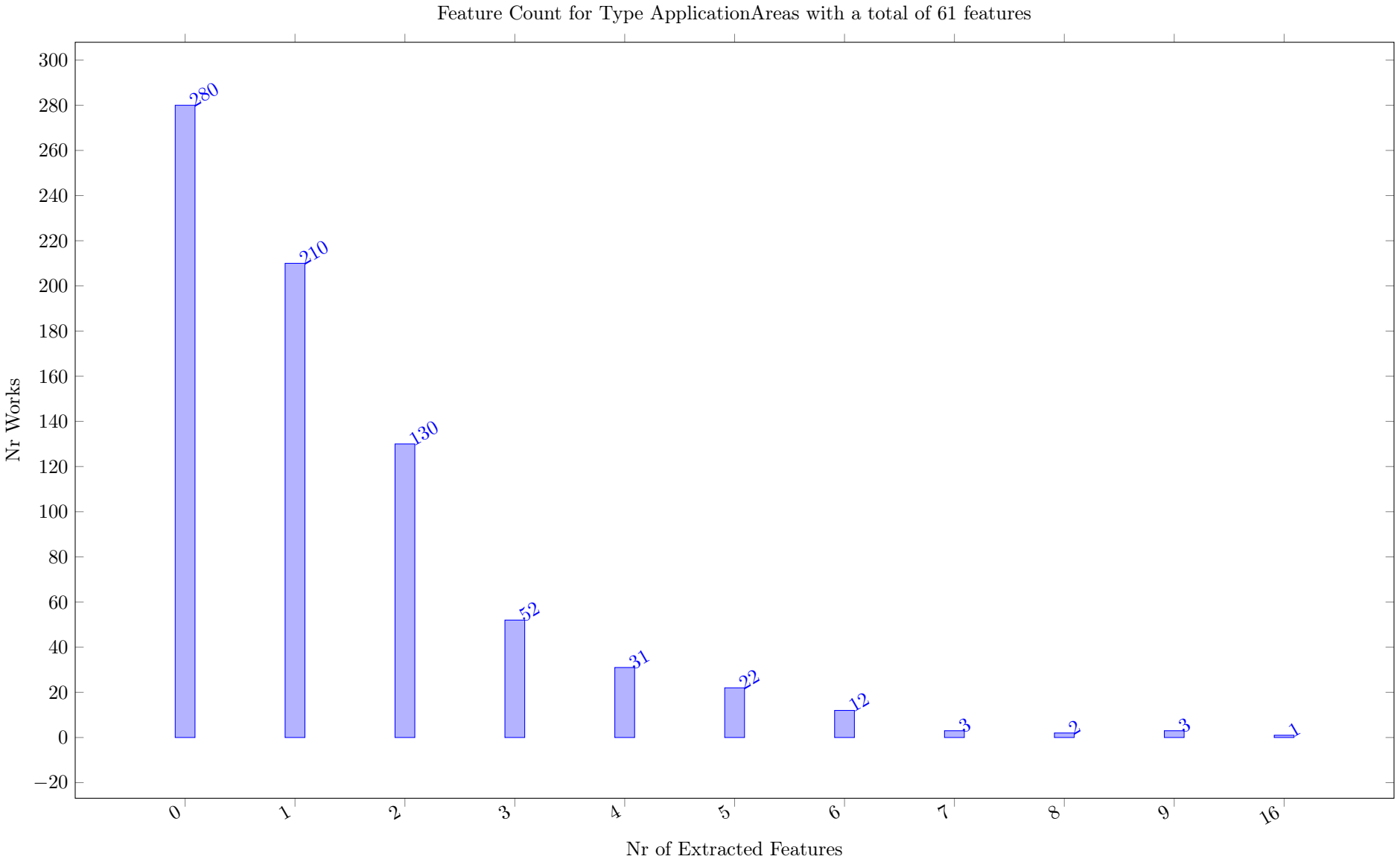
For each concept type, we count how many features are extracted by the individual works that do have a local copy, e.g. for which we can extract features. We can compare the number of features extracted to the number of concepts of a given type, which is stated in the title of the diagram.

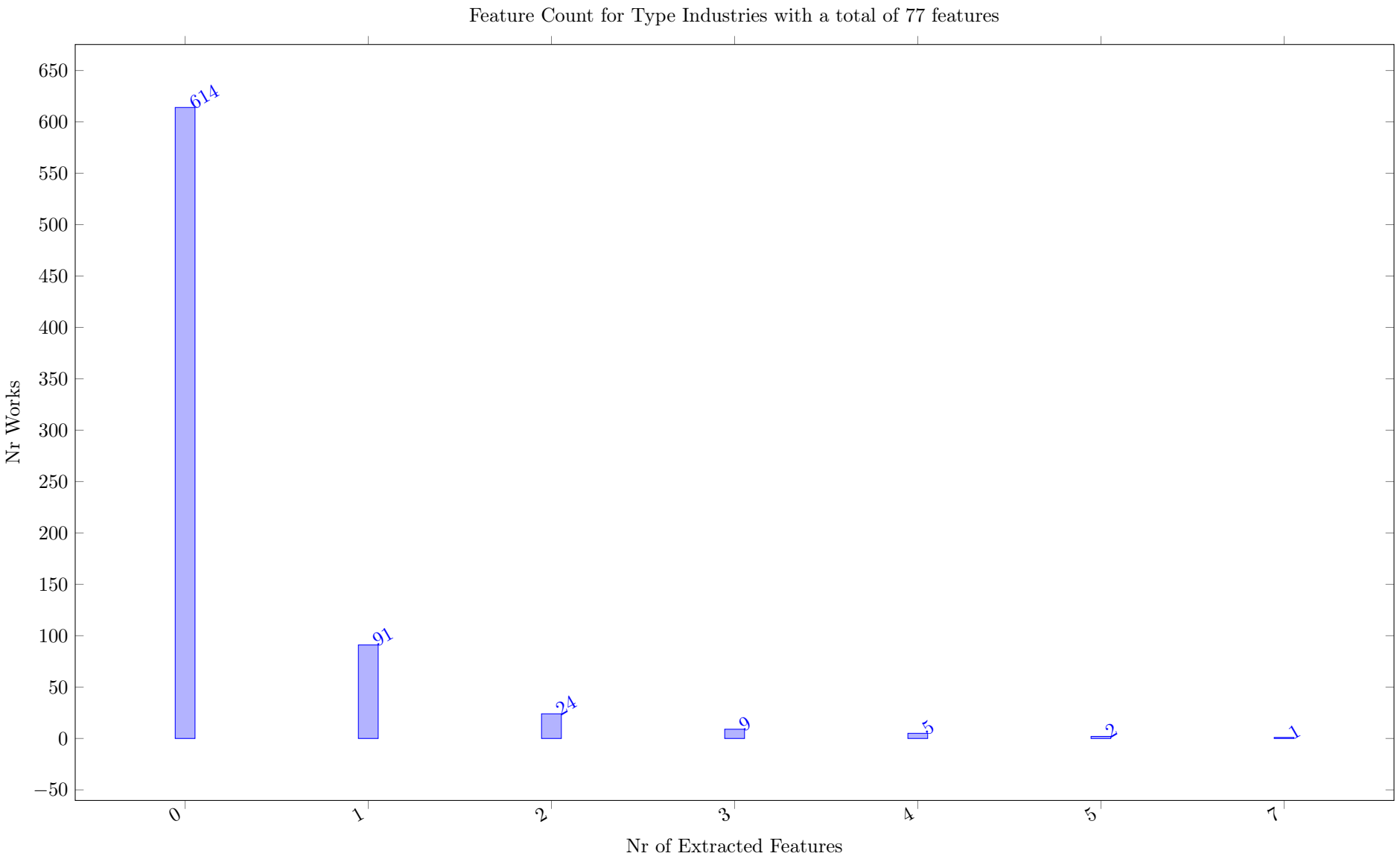
A high count indicates that a work covers many of the concepts of the given type, a low count might mean that our ontology does not have relevant concepts for that work.

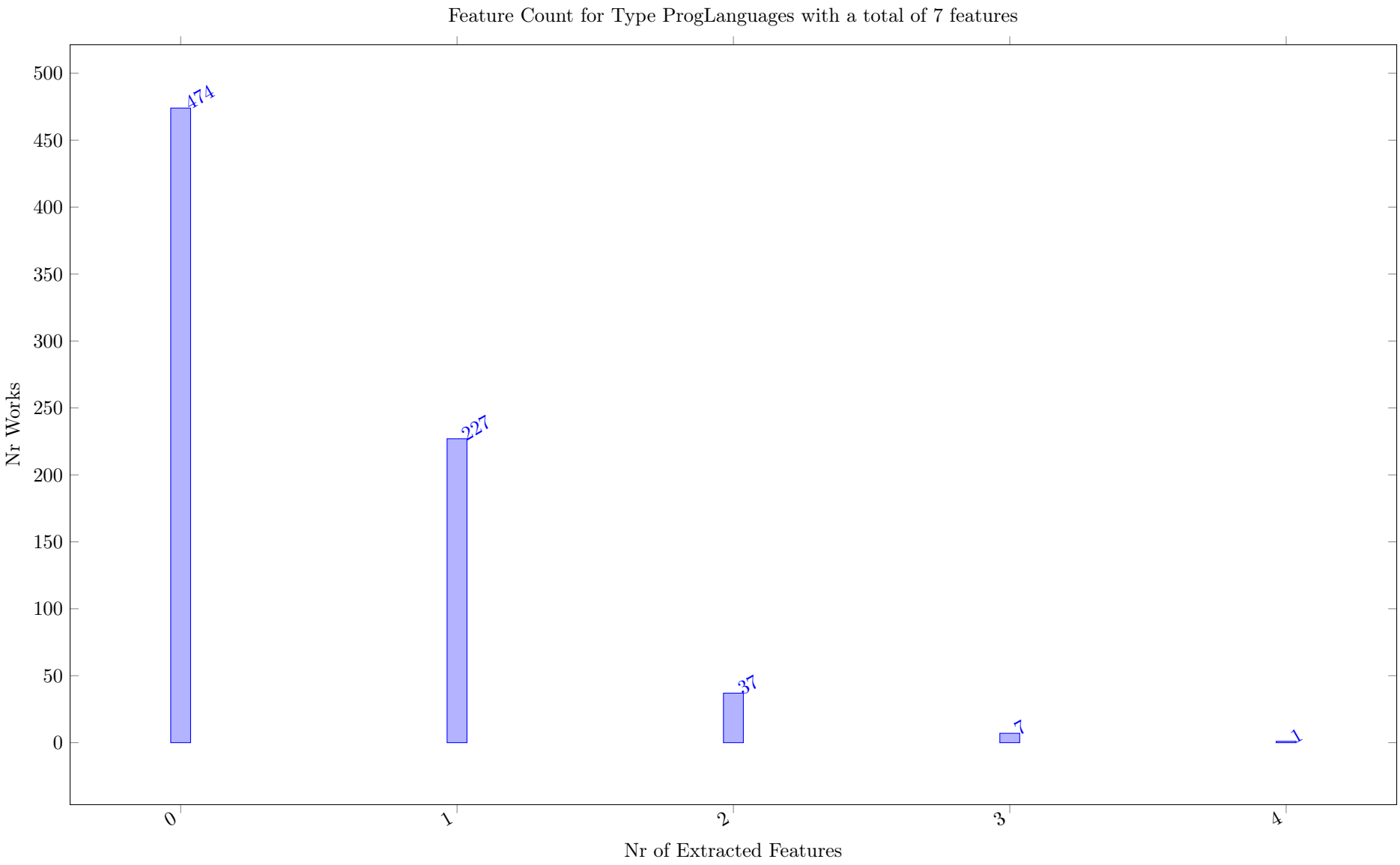

Feature Count for Type Concepts with a total of 75 features
Nr Works
Nr of Extracted Features
65
60
55
50
45
40
35
30
25
20
15
10
5
0
−5
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 38 39 40 50
4 1 1 3 5 6 11 21 27 33 37 49 46 61 42 30 51 46 43 32 34 26 30 15 20 11 8 15 6 5 6 4 2 5 2 1 1 2 2 1 1

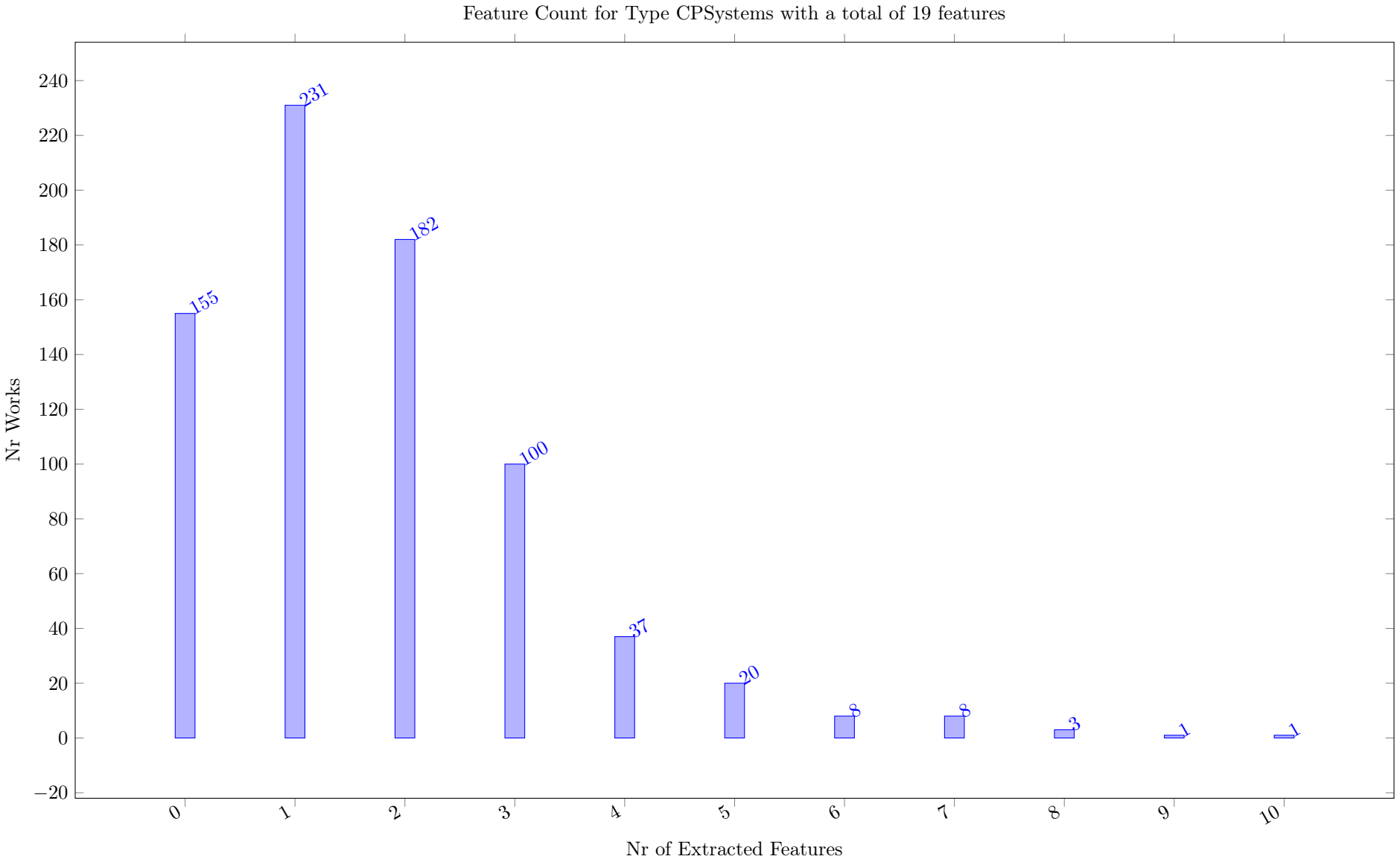

Feature Count for Type Classification with a total of 48 features
Nr Works
Nr of Extracted Features
0
50
100
150
200
250
300
350
0
1
2
3
4
5
6
7
9
11
337
151
120
77
41
7
6
4
2
1

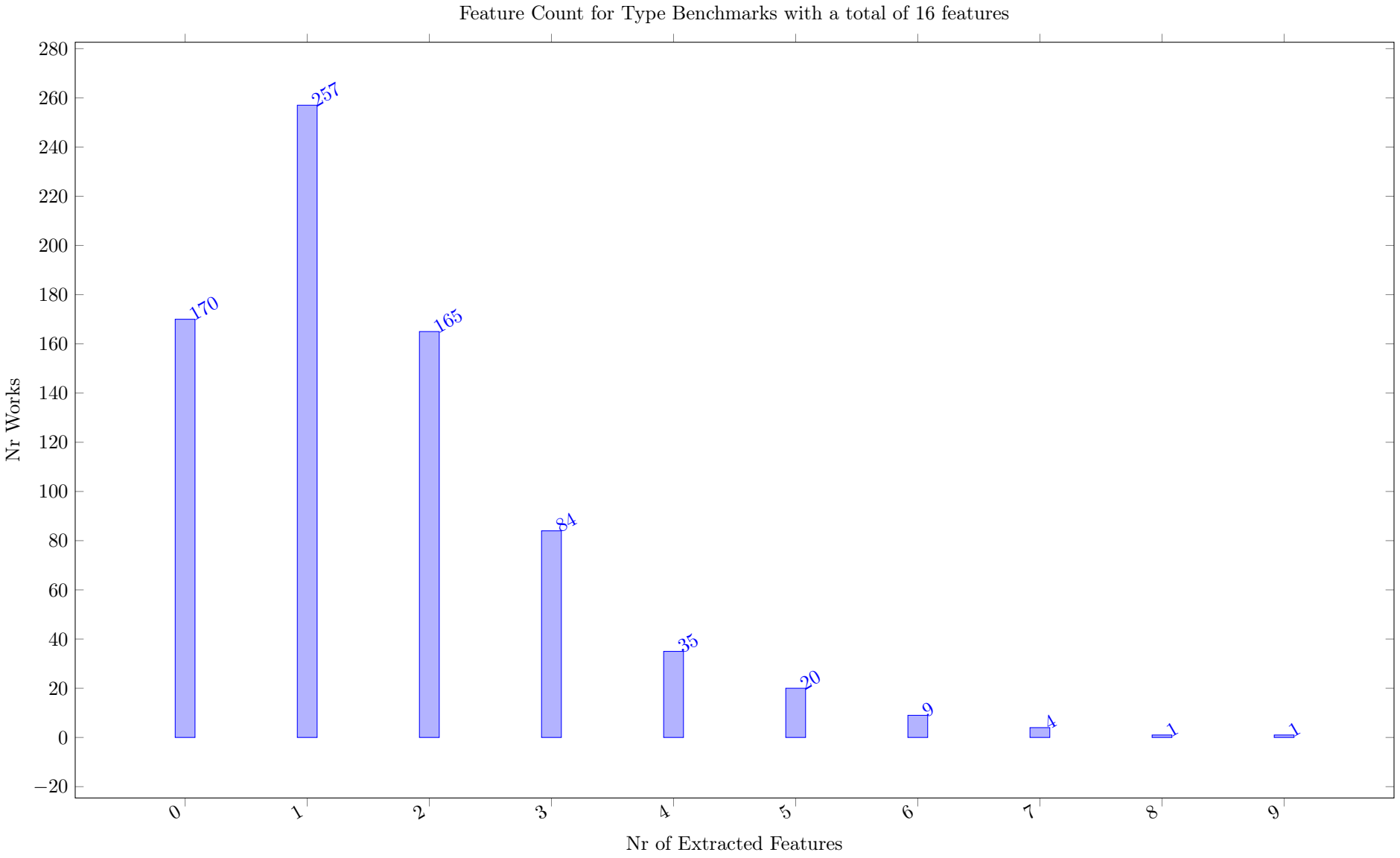

Feature Count for Type Constraints with a total of 63 features
Nr Works
Nr of Extracted Features
0
20
40
60
80
100
120
140
160
180
107
157
165
133
87
37
20
14
12
2
3
3
3
1
2
0
1
2
3
4
5
6
7
8
9
10
11
12
14
19

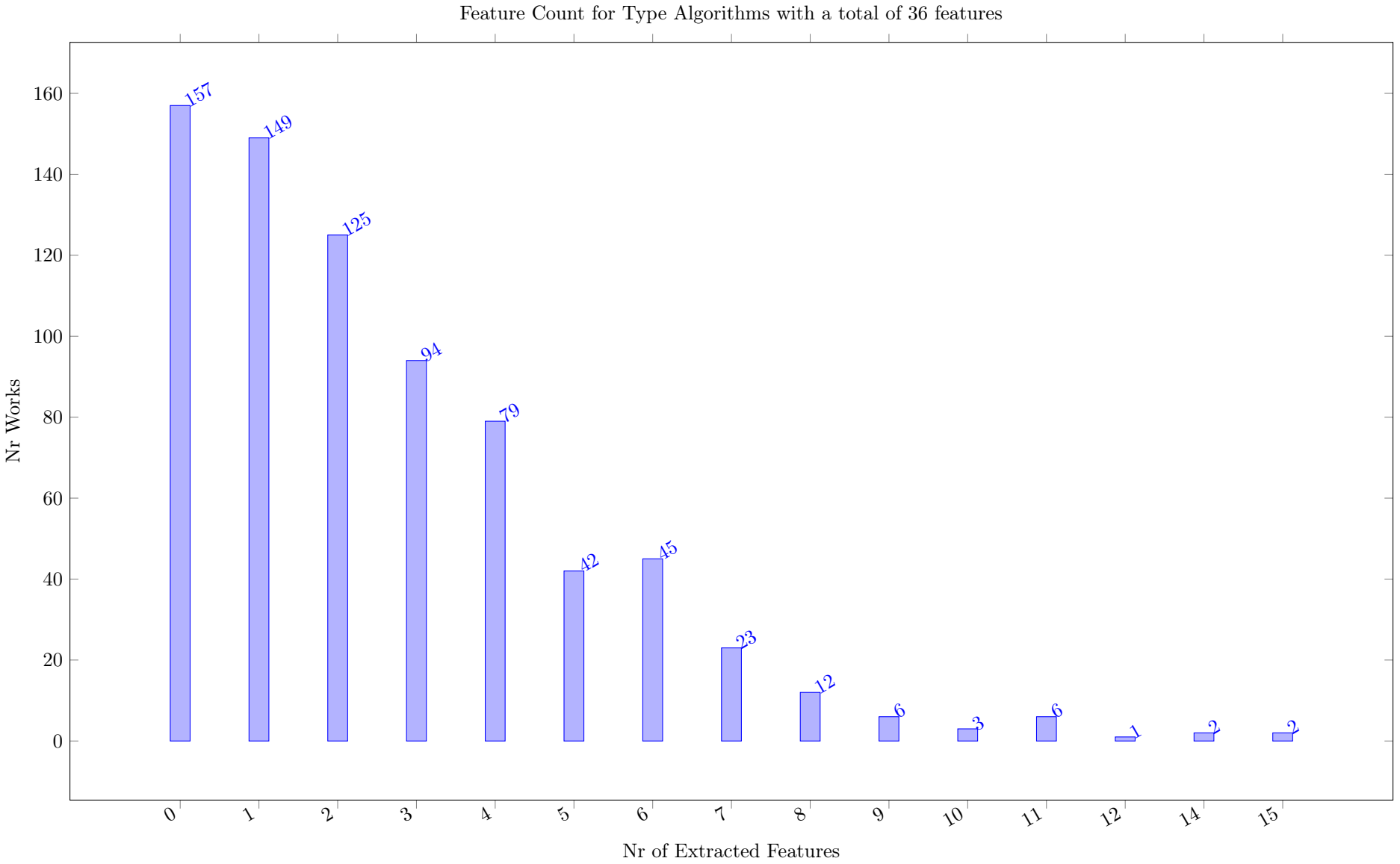

Feature Count for Type ApplicationAreas with a total of 61 features
Nr Works
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
−20
280
210
130
52
31
22
12
3
2
3
1
0
1
2
3
4
5
6
7
8
9
16
Nr of Extracted Features


Feature Count for Type Industries with a total of 77 features
Nr Works
650
600
550
500
450
400
350
300
250
200
150
100
50
0
−50
614
91
24
9
5
2
1
0
1
2
3
4
5
7
Nr of Extracted Features


Feature Count for Type ProgLanguages with a total of 7 features
Nr Works
500
450
400
350
300
250
200
150
100
50
0
474
227
37
7
1
0
1
2
3
4
Nr of Extracted Features


Feature Count for Type CPSystems with a total of 19 features
Nr Works
240
220
200
180
160
140
120
100
80
60
40
20
0
−20
155
231
182
100
37
20
8
8
3
1
1
0
1
2
3
4
5
6
7
8
9
10
Nr of Extracted Features


Feature Count for Type Benchmarks with a total of 16 features
Nr Works
Nr of Extracted Features
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
−20
0
1
2
3
4
5
6
7
8
9
170
257
165
84
35
20
9
4
1
1

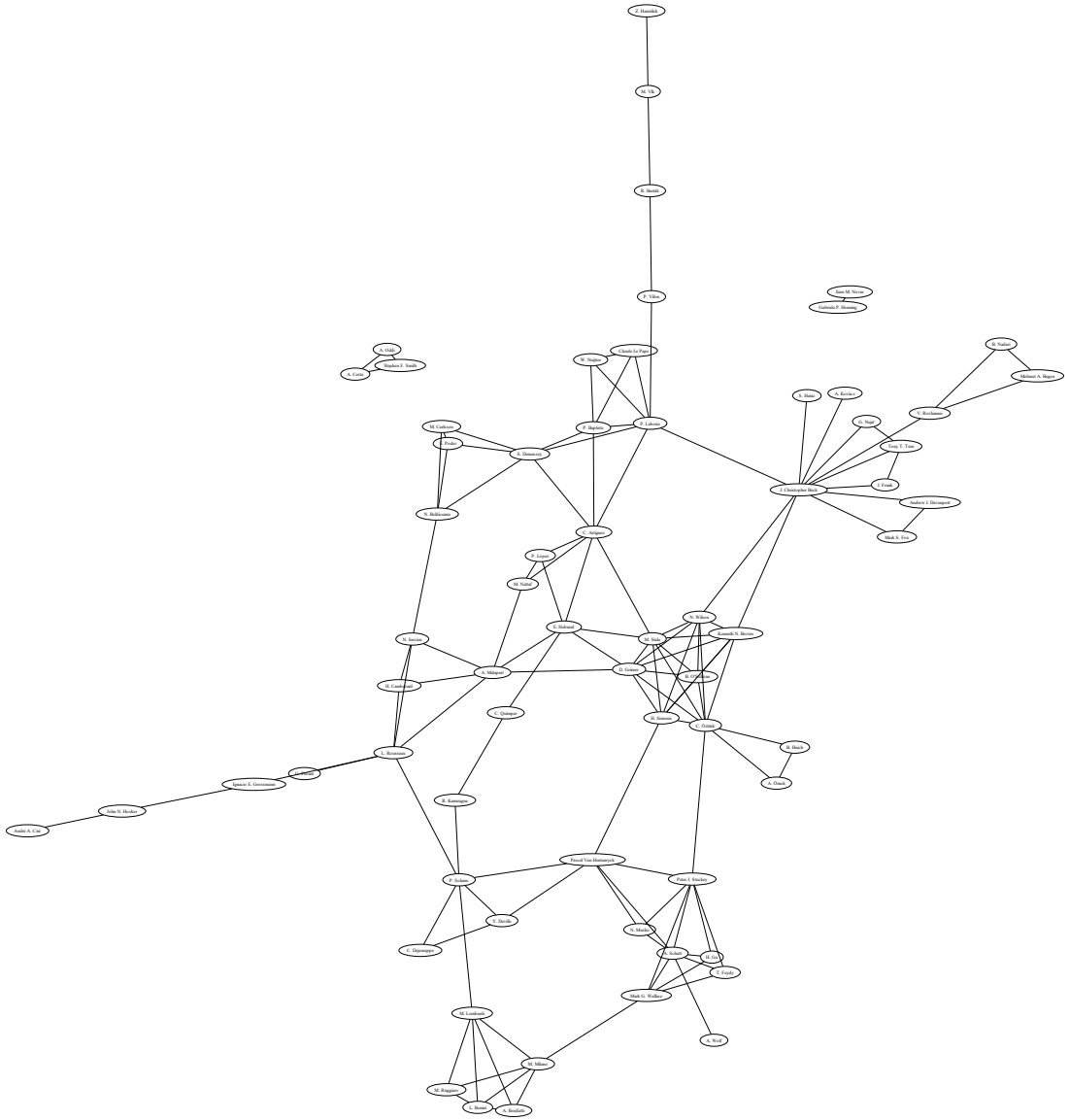

Feature Count for Type Algorithms with a total of 36 features
Nr Works
Nr of Extracted Features
0
20
40
60
80
100
120
140
160
0
1
2
3
4
5
6
7
8
9
10
11
12
14
15
157
149
125
94
79
42
45
23
12
6
3
6
1
2
2

12 Coauthor graph

The coauthor plot is created by graphviz, and is based on the coauthor relations extracted from the author fields of the works. Authors with few works are not shown, to avoid a cluttered view. Note that this analysis depends on the use of canonical forms of author names. If bib entries come from any different sources, we will need to check this manually. DBLP seems to be using ORCID values and typically identifies the authors of a work with a canonical representation of their name. Accents and umlauts are other sources of having multiple forms of the name of the same author. Note that the risk of two different authors using the same name should be low for very specific literature surveys, but cannot be checked with the data sources currently used.

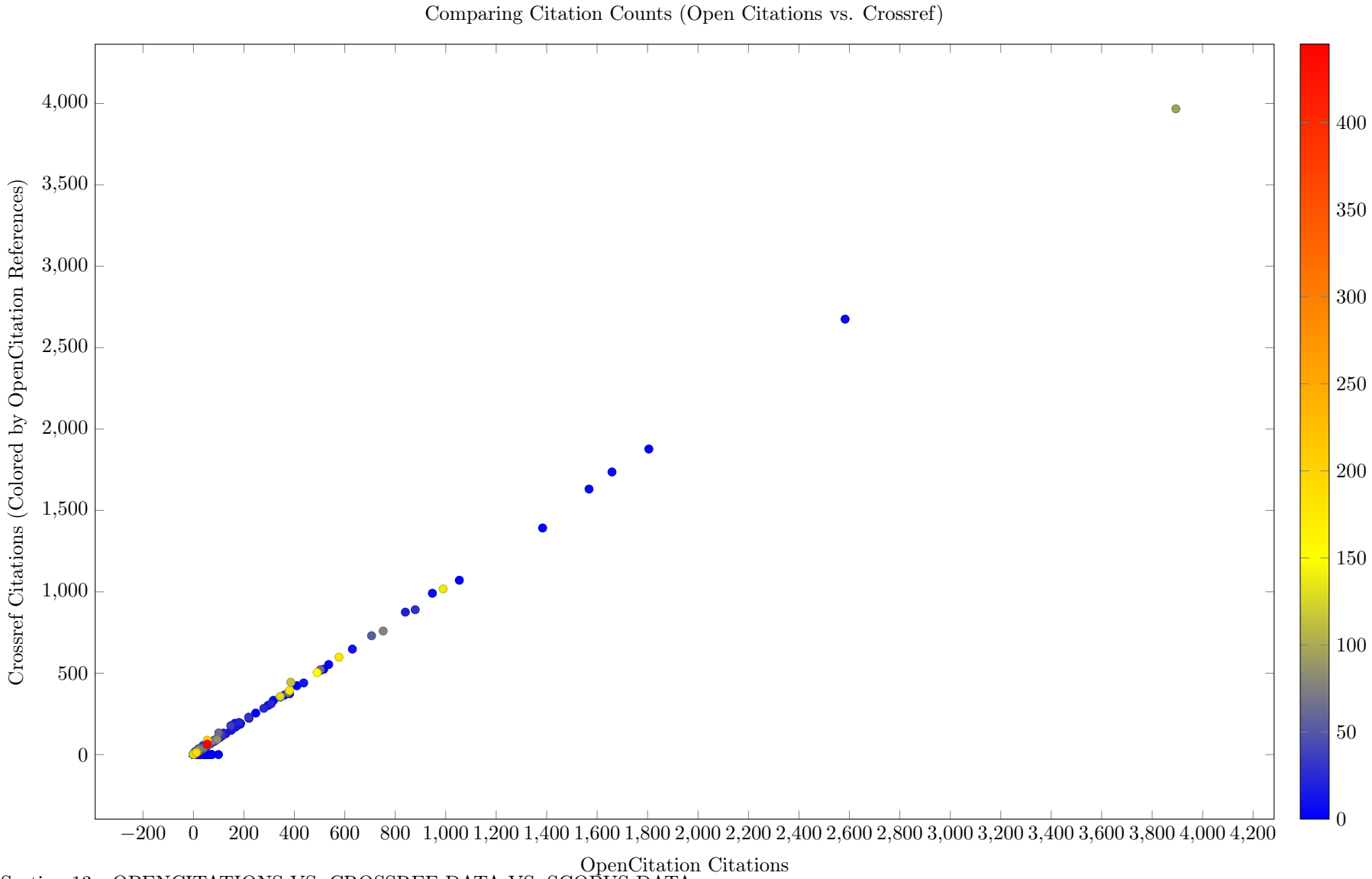
The plots can be made with different layout tools in graphviz, it seems that fdp produces the most consistent visually attractive plots for this type of display. This probably needs more work on parameter settings to be fully automated.

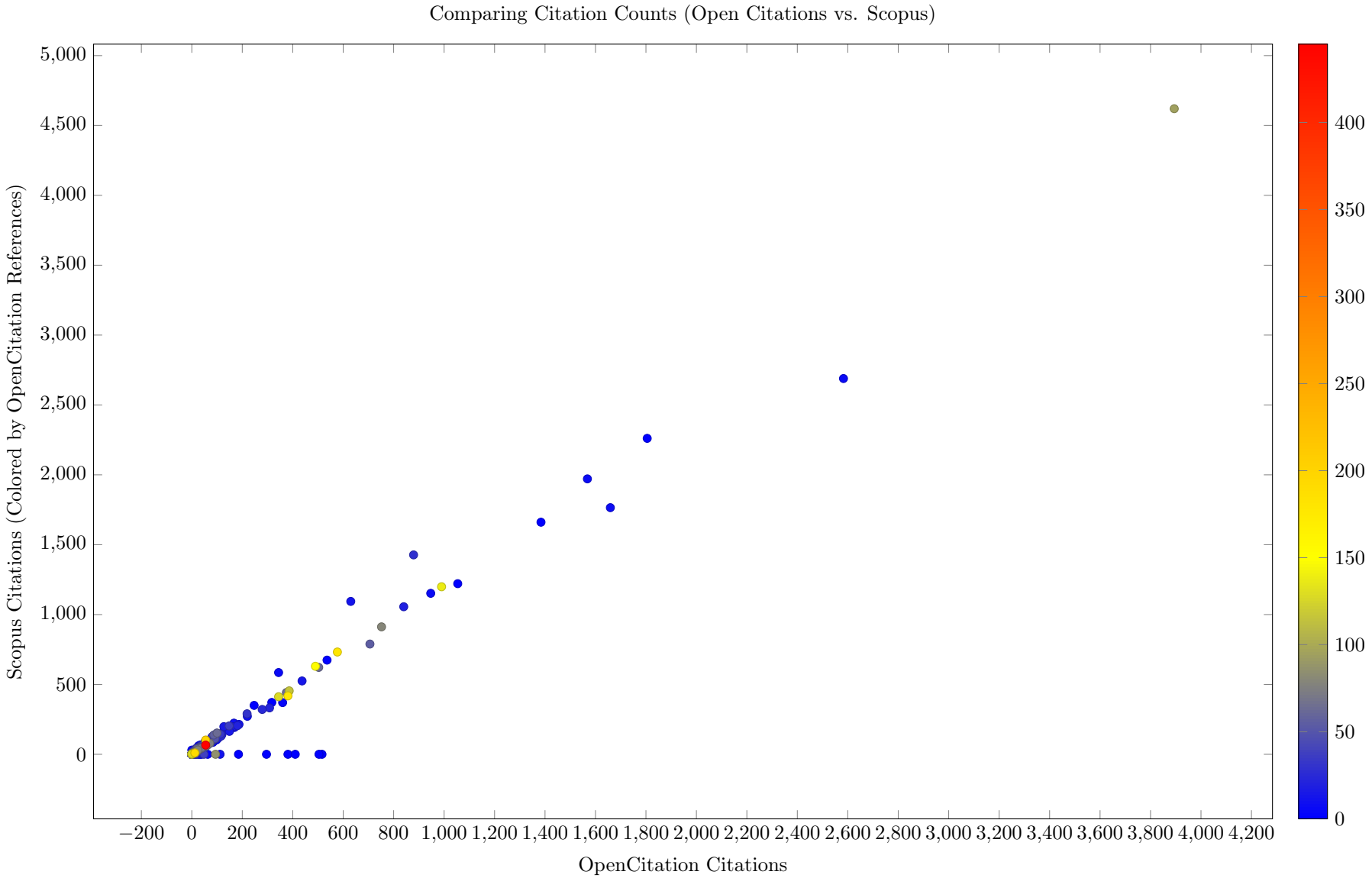
Figure 1: Coauthor Graph Drawn with fdp (Graphviz)

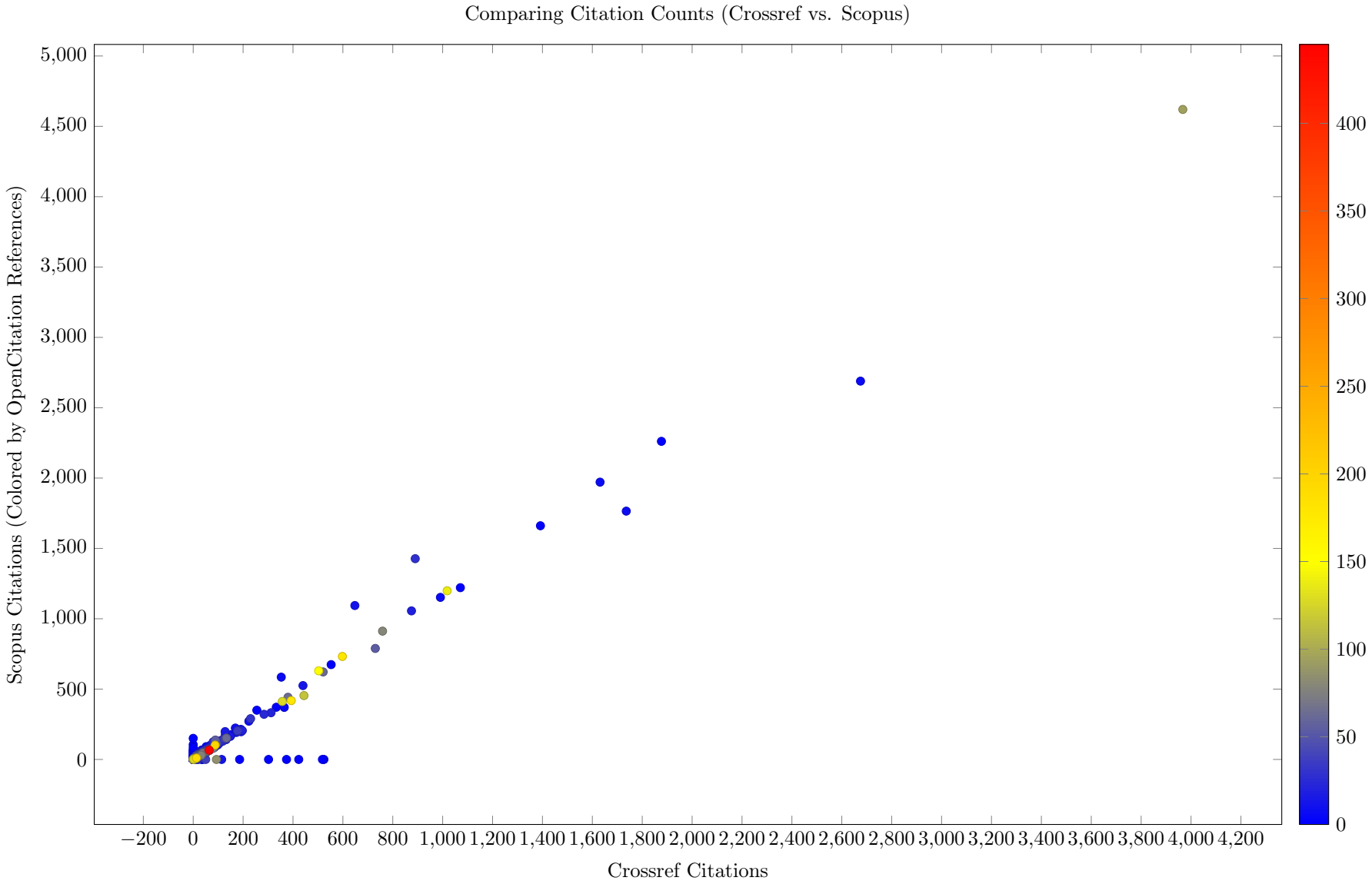


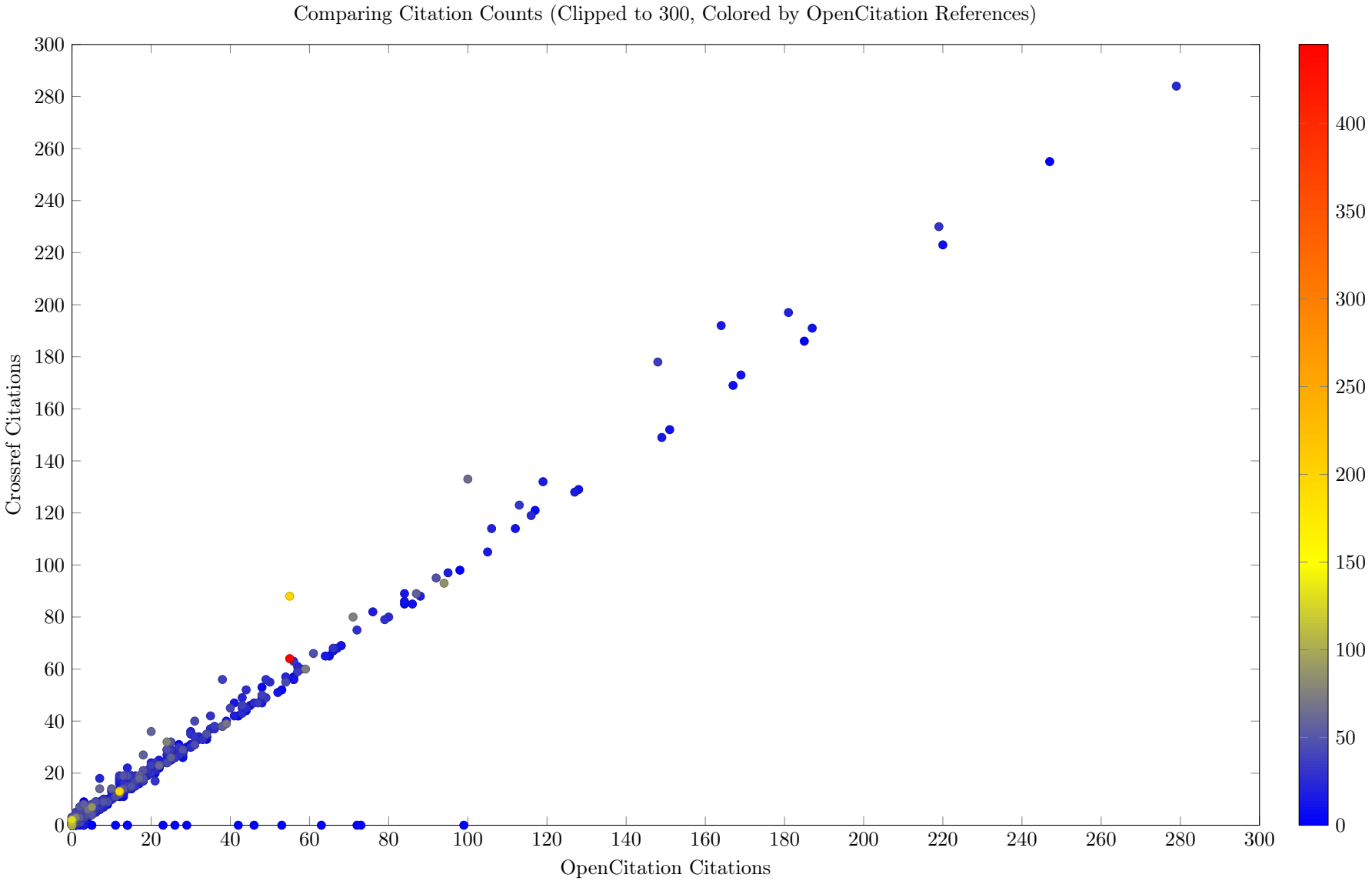
13 OpenCitations vs. Crossref Data vs. Scopus Data

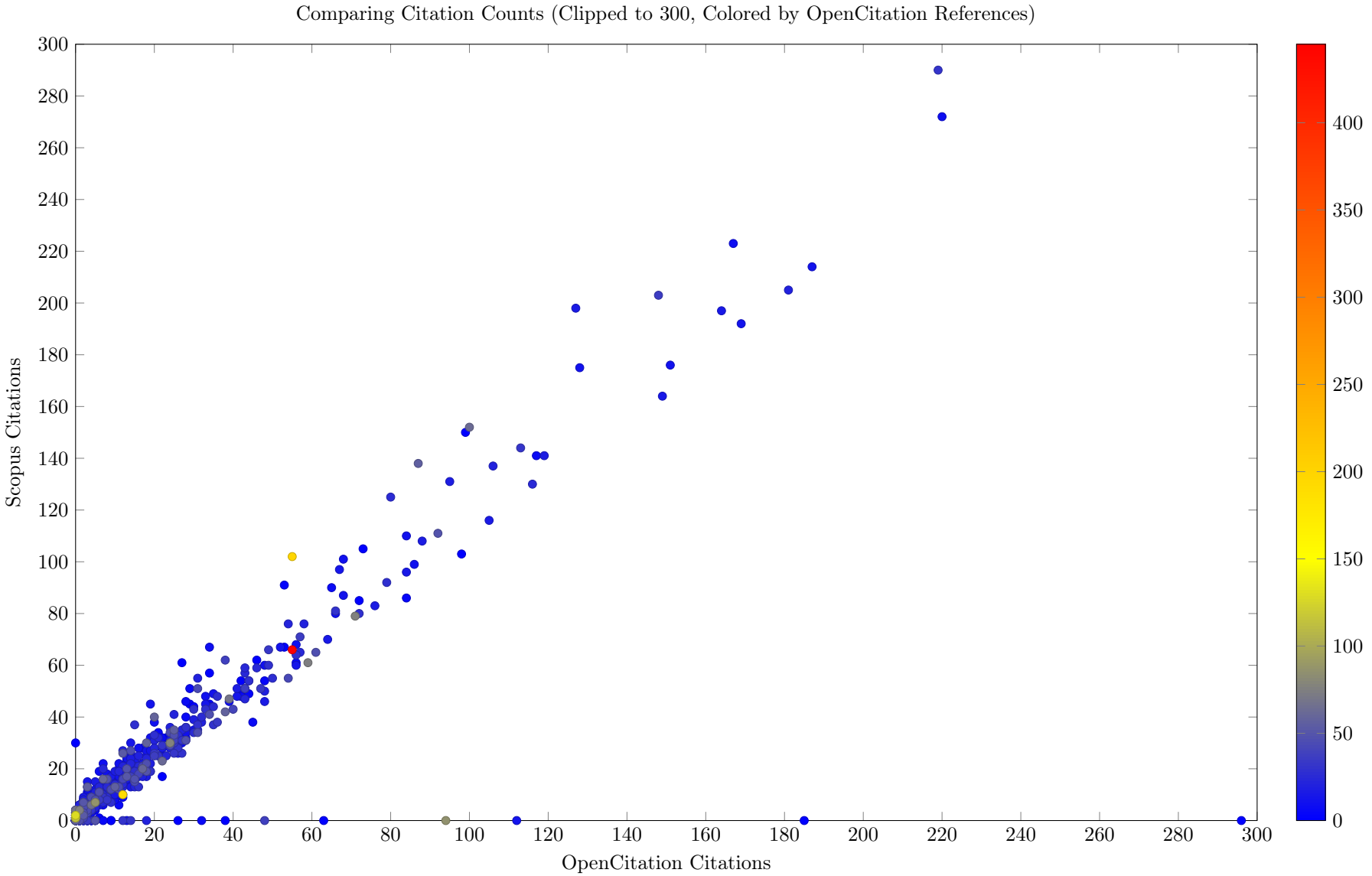
13.1 Citation Comparison

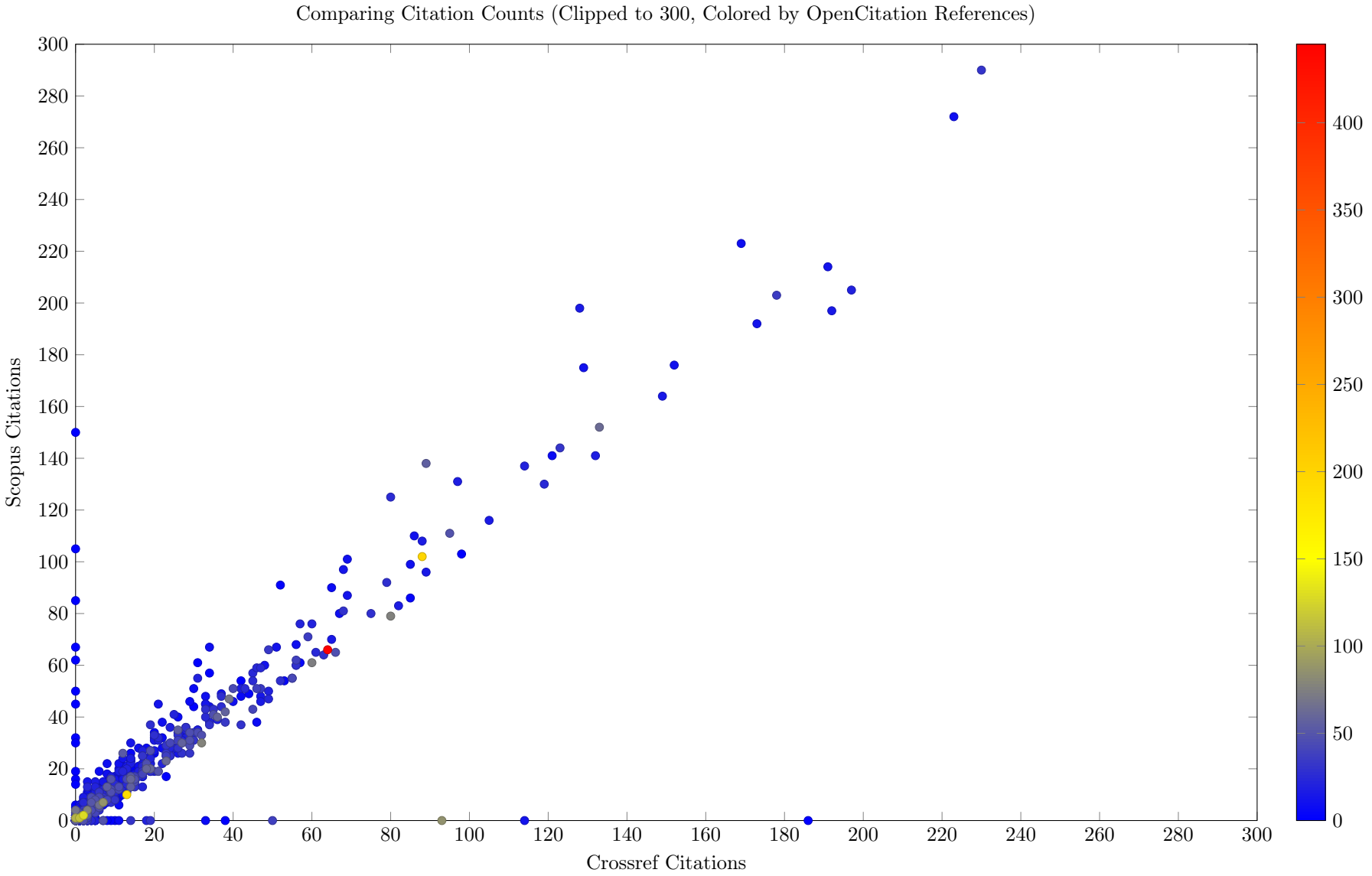



Comparing Citation Counts (Open Citations vs. Scopus)
Scopus Citations (Colored by OpenCitation References)
OpenCitation Citations
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
−200 0 200 400 600 800 1,000 1,200 1,400 1,600 1,800 2,000 2,200 2,400 2,600 2,800 3,000 3,200 3,400 3,600 3,800 4,000 4,200
400
350
300
250
200
150
100
50
0

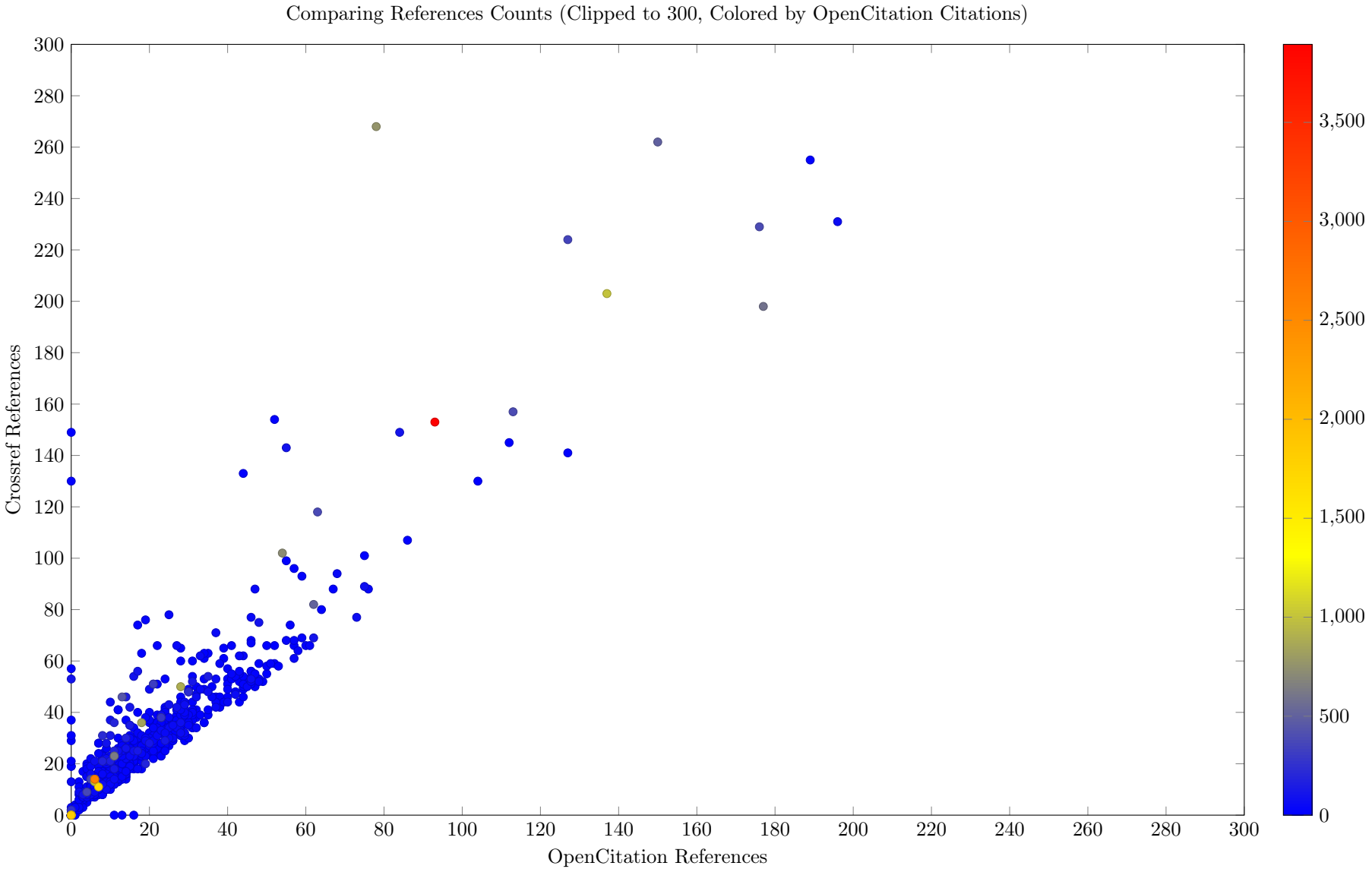

Comparing Citation Counts (Crossref vs. Scopus)
Scopus Citations (Colored by OpenCitation References)
5,000
4,500
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
−200 0 200 400 600 800 1,000 1,200 1,400 1,600 1,800 2,000 2,200 2,400 2,600 2,800 3,000 3,200 3,400 3,600 3,800 4,000 4,200
Crossref Citations
400
350
300
250
200
150
100
50
0


Comparing Citation Counts (Clipped to 300, Colored by OpenCitation References)
Crossref Citations
OpenCitation Citations
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
0
50
100
150
200
250
300
350
400

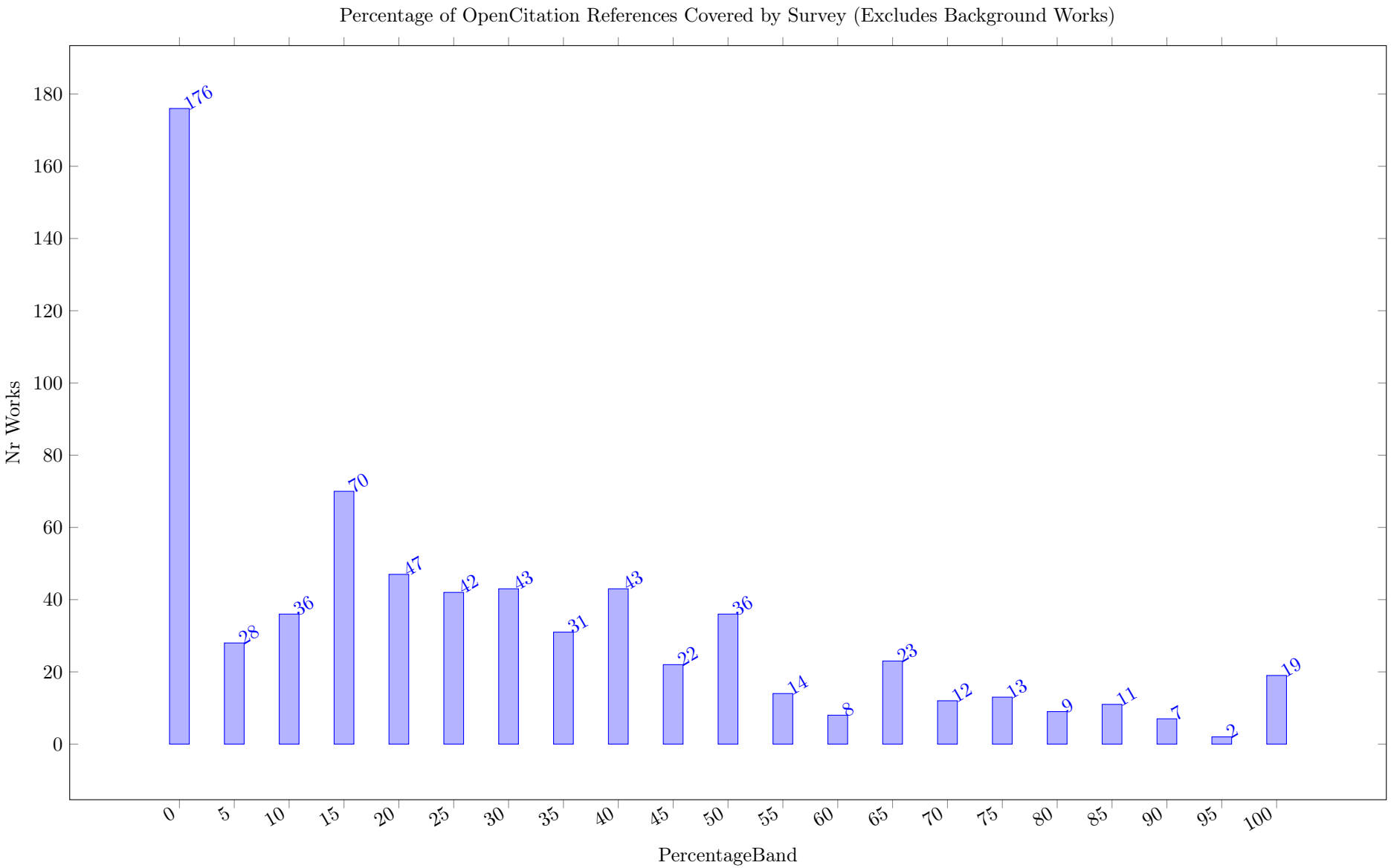

Comparing Citation Counts (Clipped to 300, Colored by OpenCitation References)
Scopus Citations
OpenCitation Citations
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
0
50
100
150
200
250
300
350
400

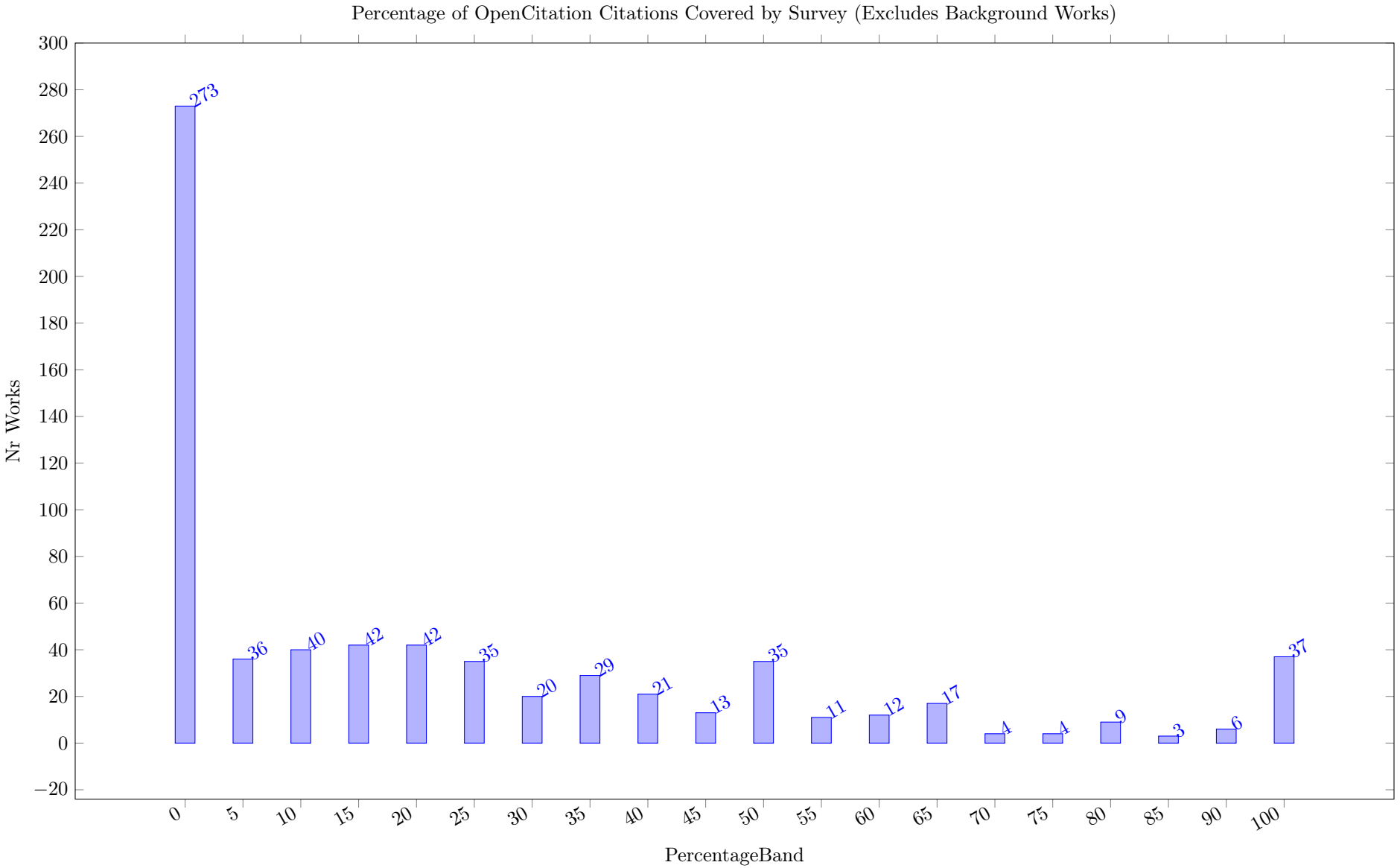

Comparing Citation Counts (Clipped to 300, Colored by OpenCitation References)
Scopus Citations
Crossref Citations
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
0
50
100
150
200
250
300
350
400

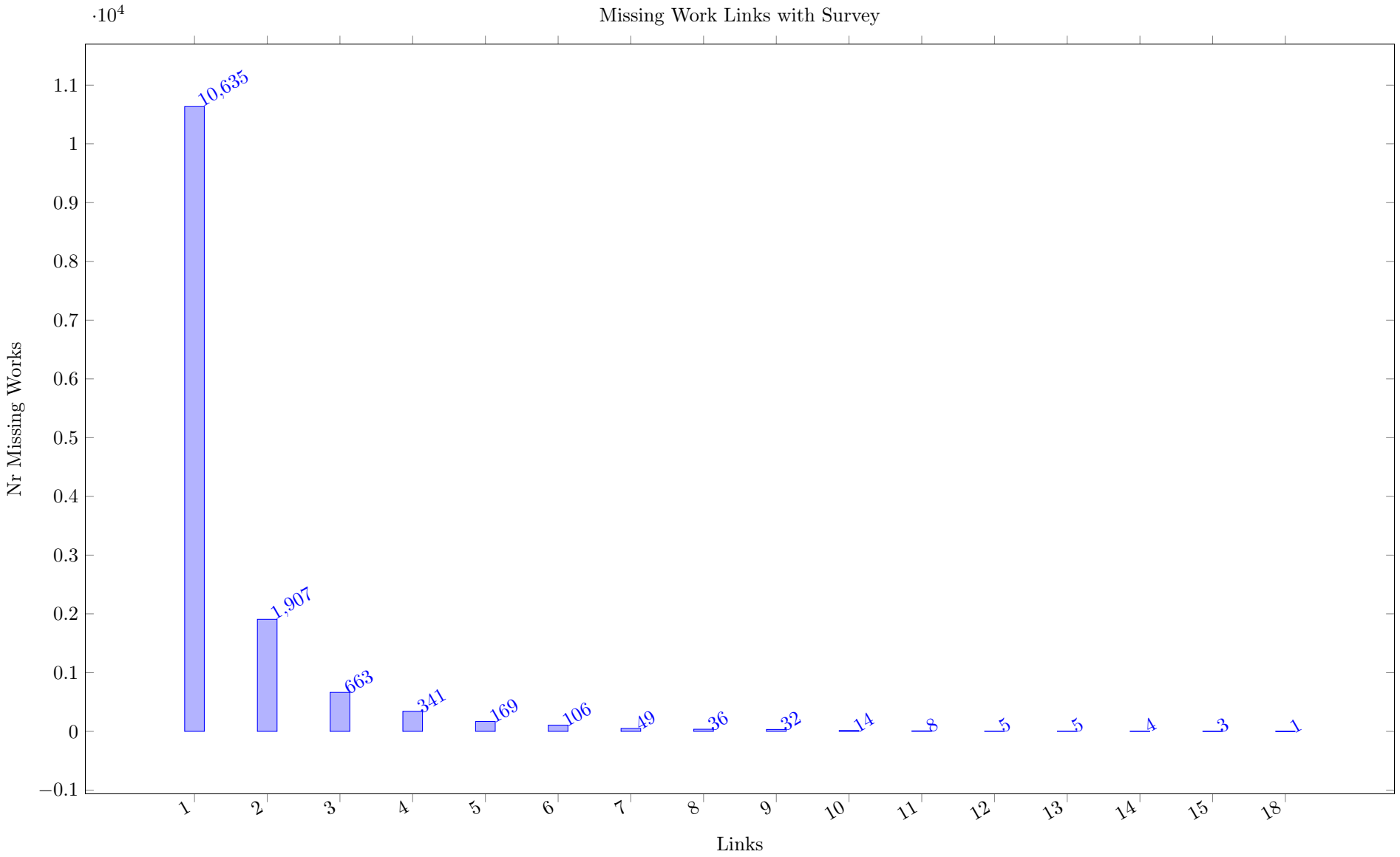
13.2 References Comparison



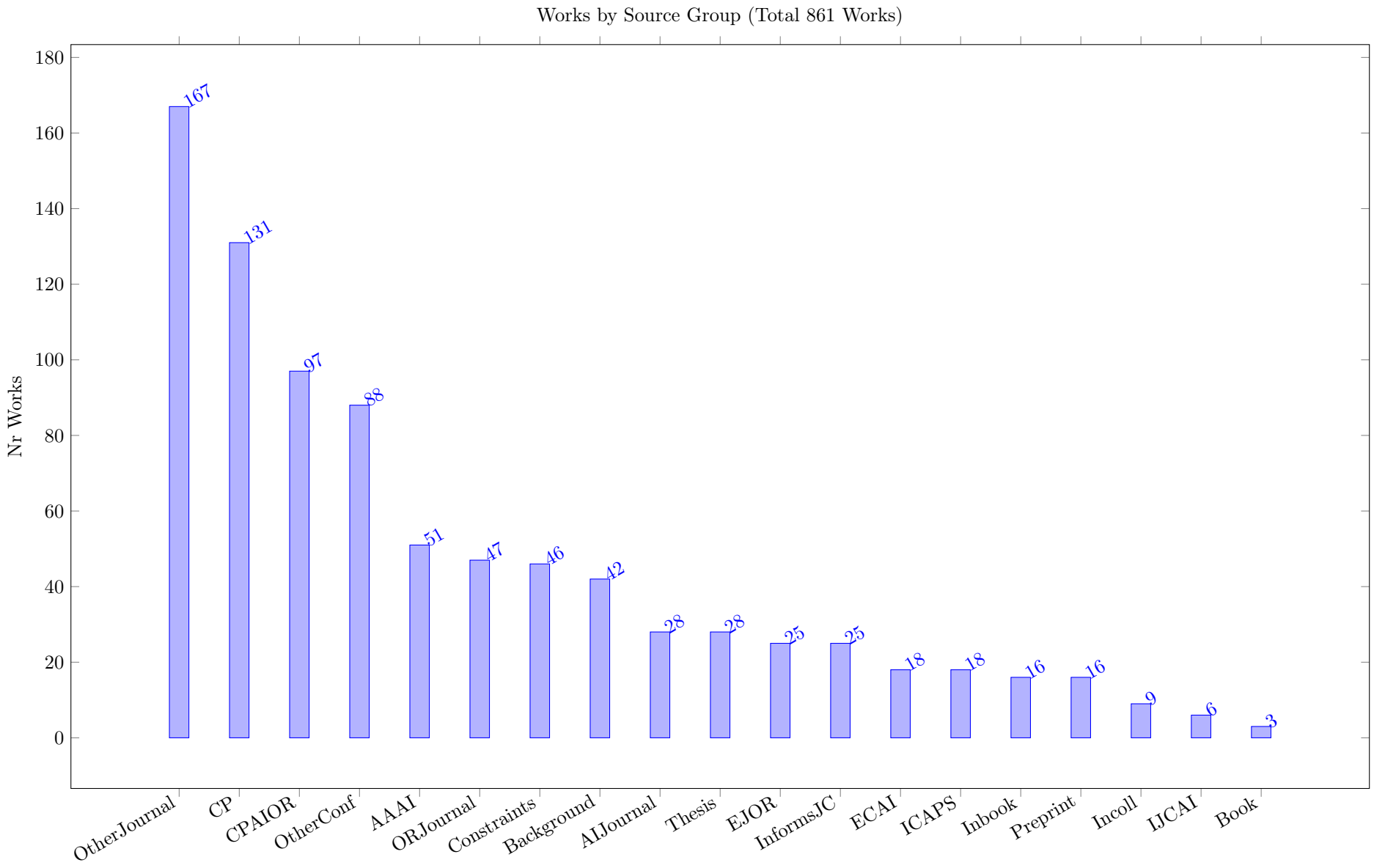
13.3 Percentage Cover



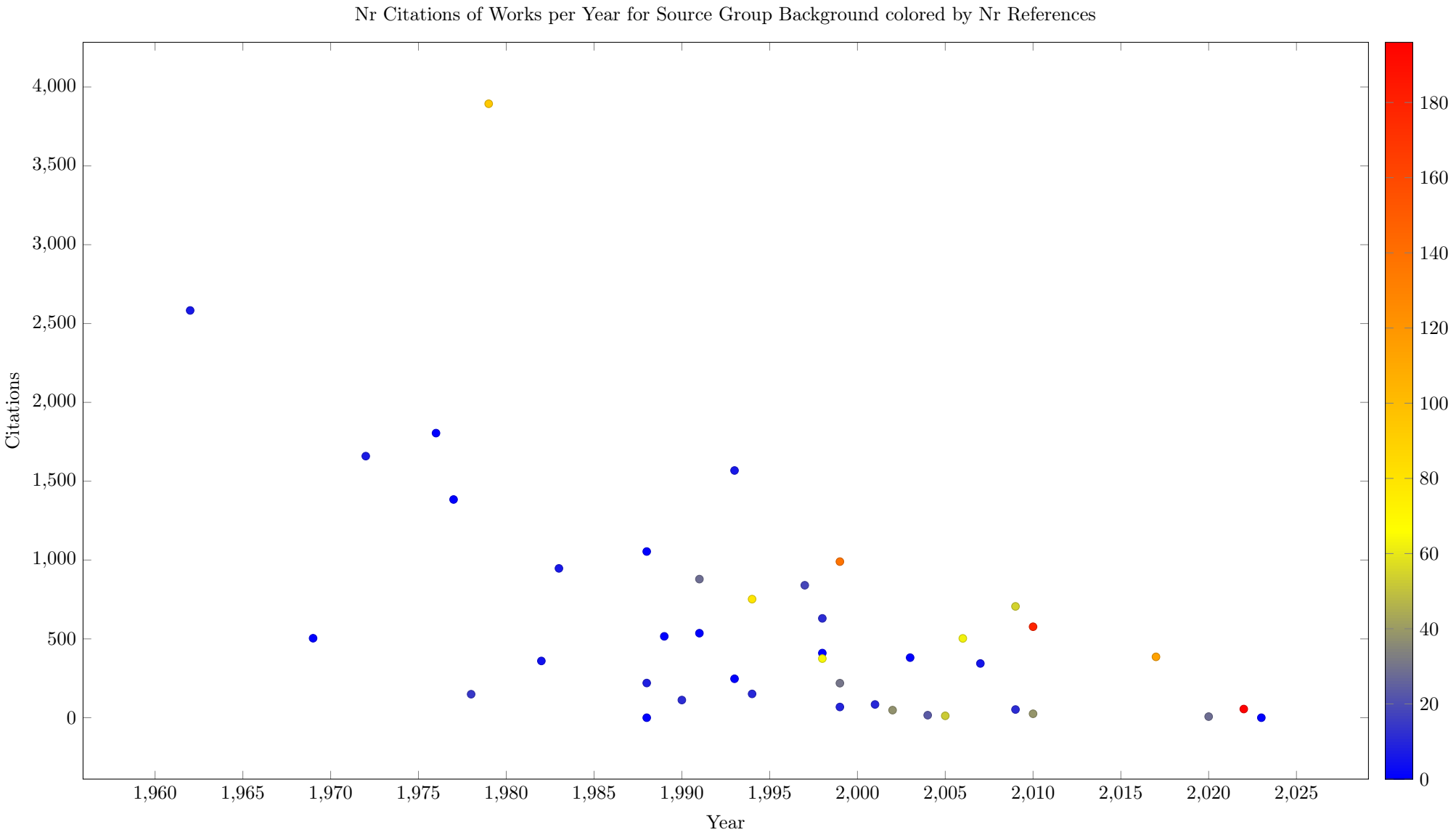

Percentage of OpenCitation Citations Covered by Survey (Excludes Background Works)
Nr Works
PercentageBand
300
280
260
240
220
200
180
160
140
120
100
80
60
40
20
0
−20
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85
90
100
273
36
40
42
42
35
20
29
21
13
35
11
12
17
4
4
9
3
6
37

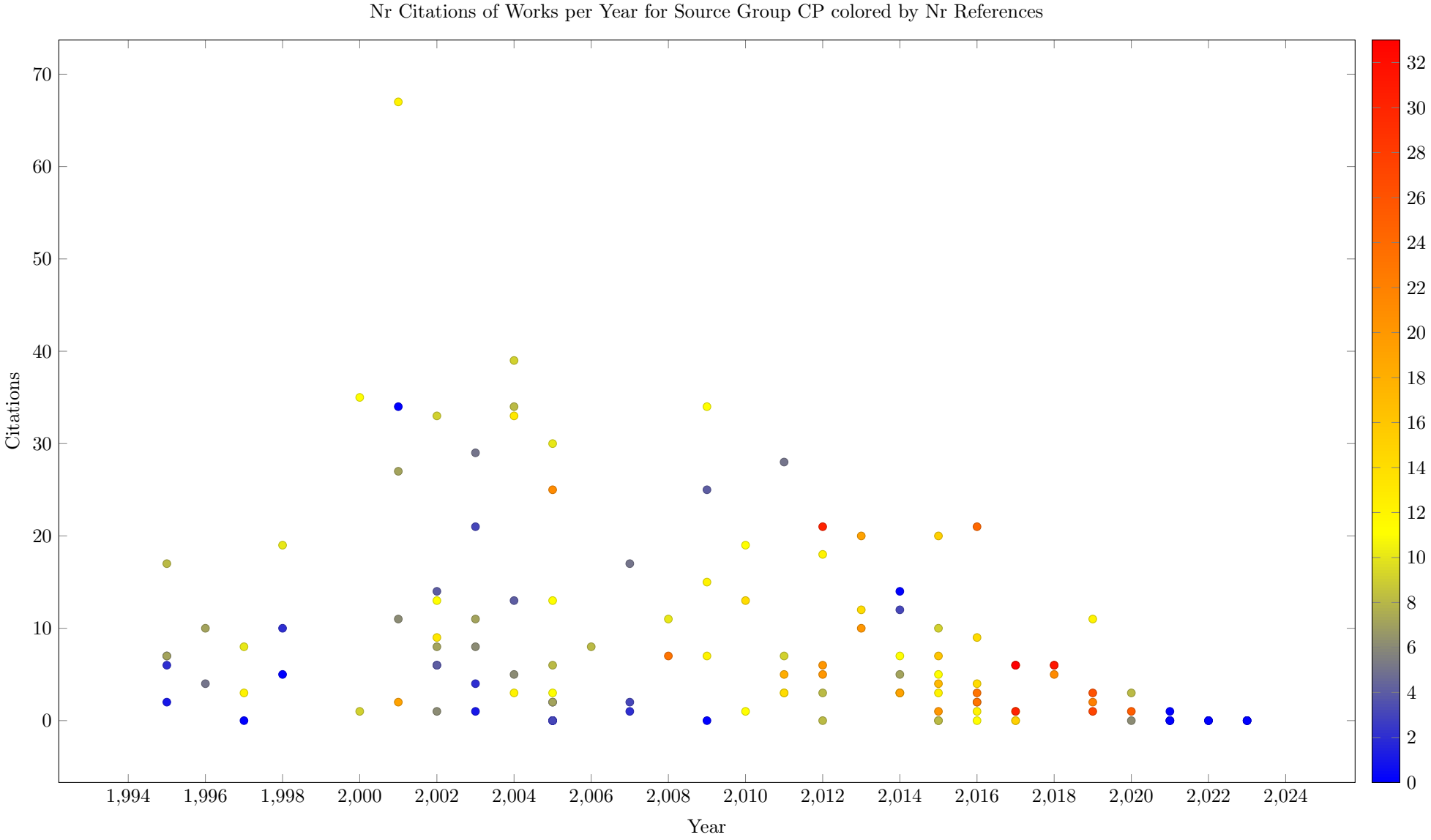

Missing Work Links with Survey
$\cdot 10^4$
Nr Missing Works
Links
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
−0.1
10,635
1,907
663
341
169
106
49
36
32
14
8
5
5
4
3
1
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
18

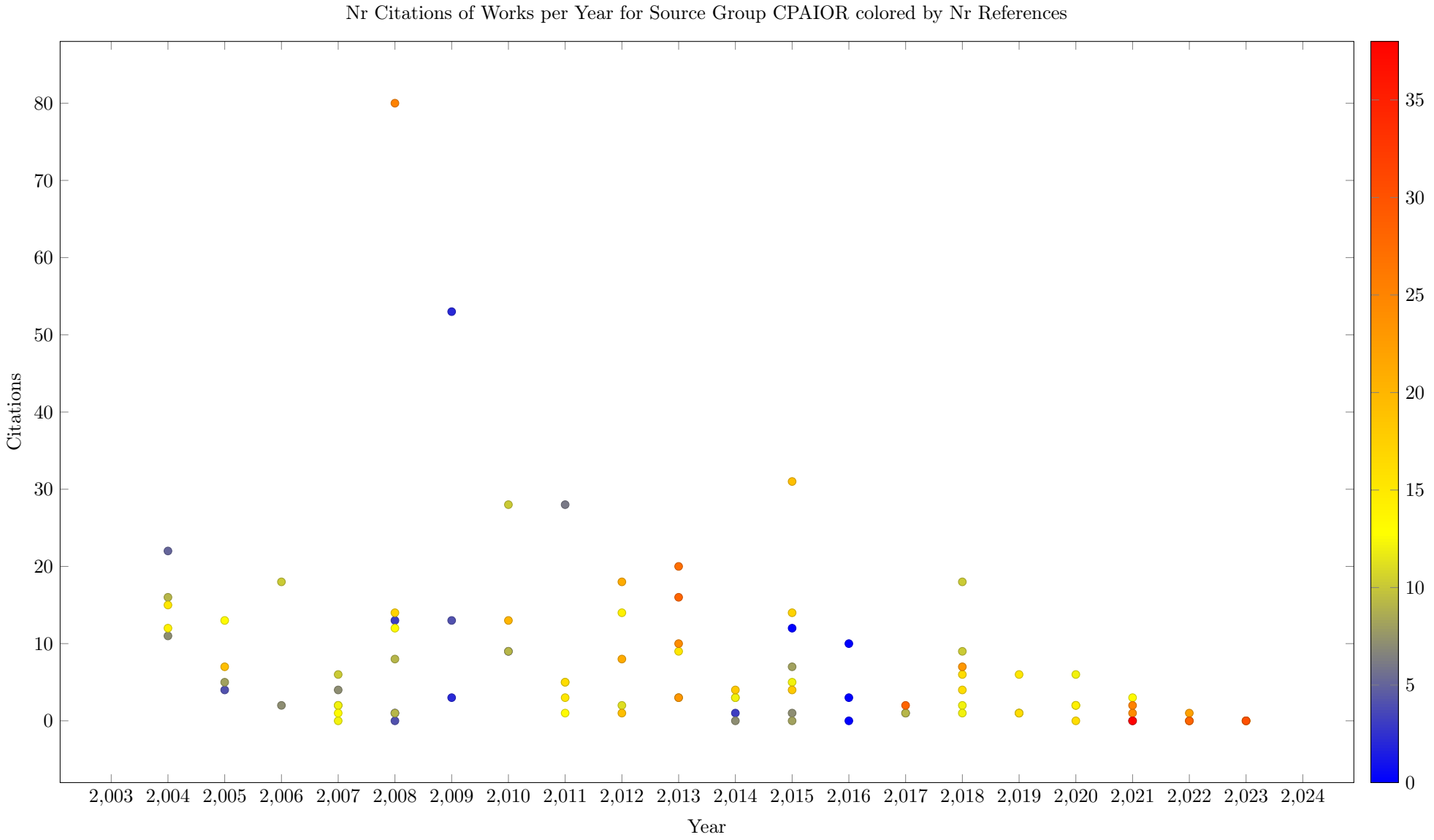
14 Citations by Year and Source Group

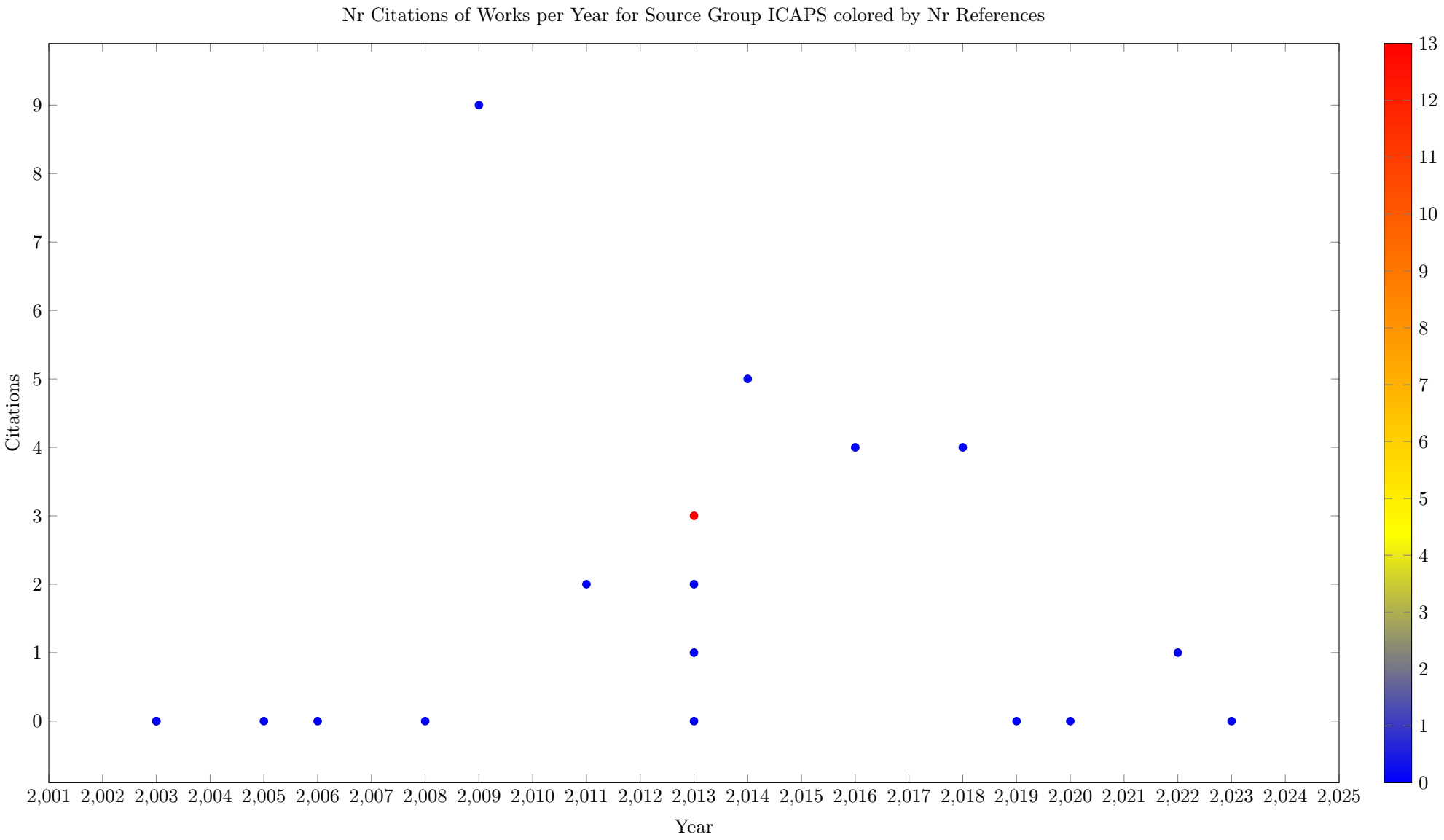


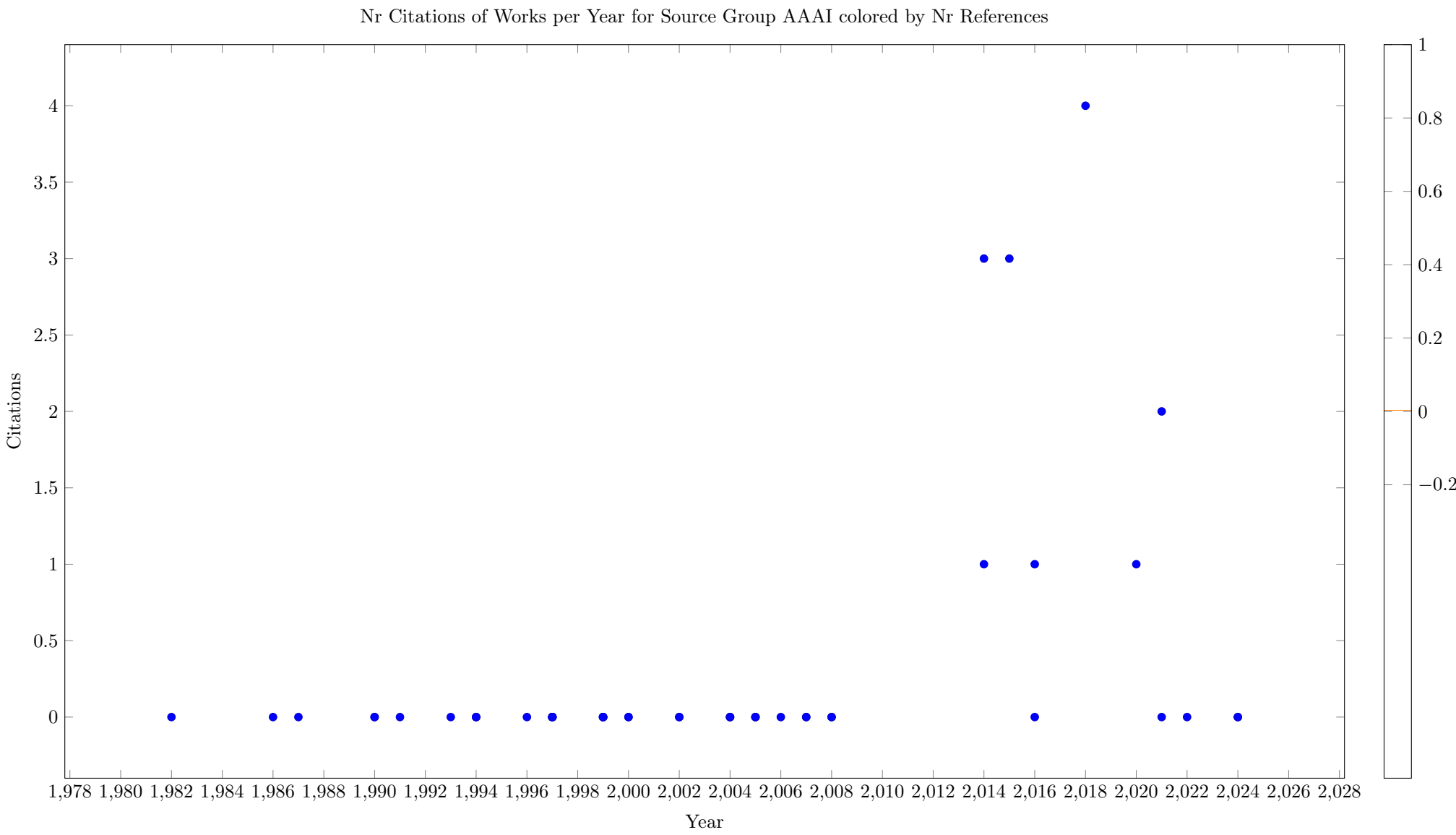
14.1 Source Group Citations by Year

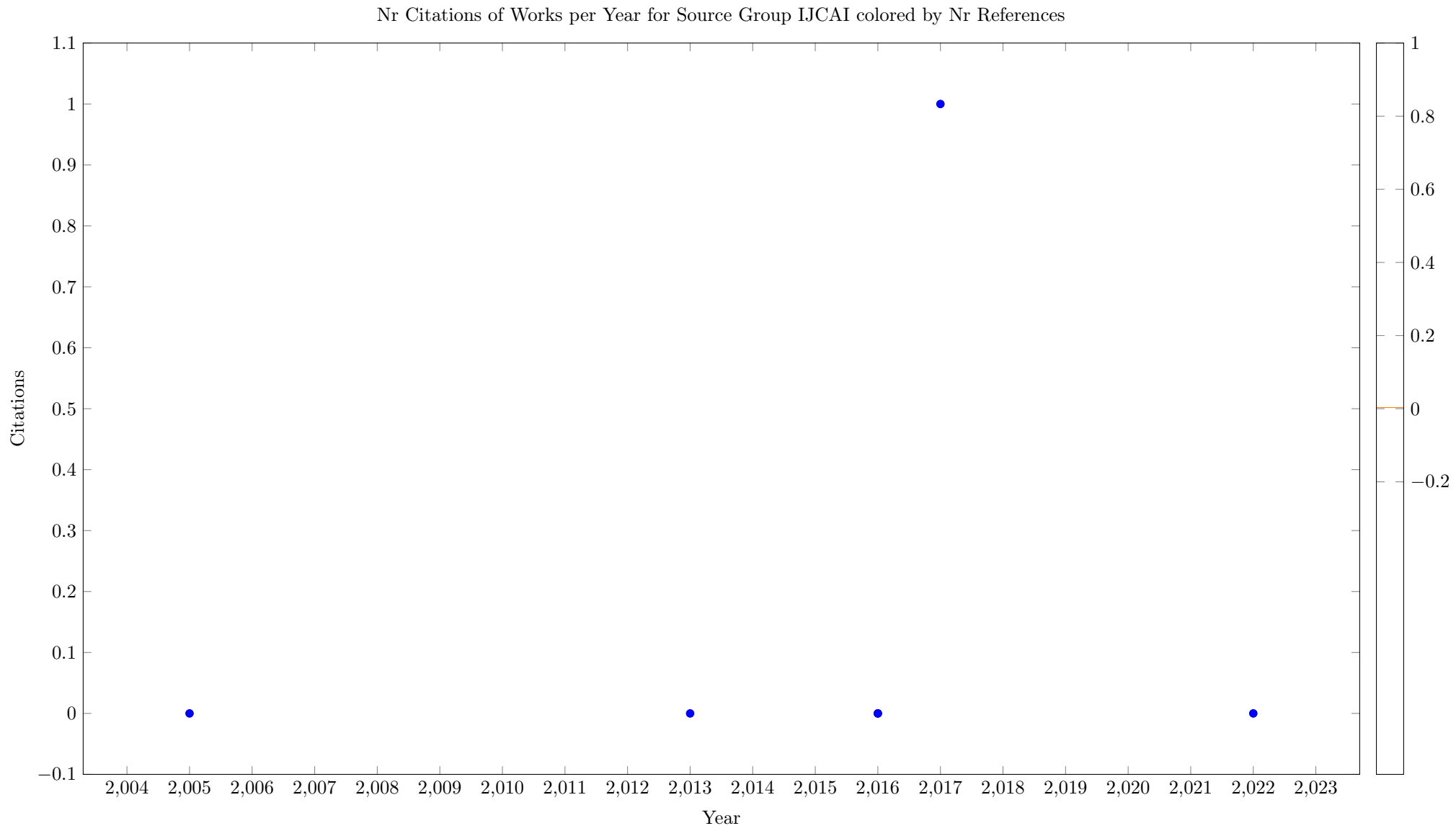



Nr Citations of Works per Year for Source Group CP colored by Nr References
Citations
70
60
50
40
30
20
10
0
1,994
1,996
1,998
2,000
2,002
2,004
2,006
2,008
2,010
2,012
2,014
2,016
2,018
2,020
2,022
2,024
Year
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0


Nr Citations of Works per Year for Source Group CPAIOR colored by Nr References
Citations
0
10
20
30
40
50
60
70
80
Year
2,003
2,004
2,005
2,006
2,007
2,008
2,009
2,010
2,011
2,012
2,013
2,014
2,015
2,016
2,017
2,018
2,019
2,020
2,021
2,022
2,023
2,024
0
5
10
15
20
25
30
35


Nr Citations of Works per Year for Source Group ICAPS colored by Nr References
Citations
0
1
2
3
4
5
6
7
8
9
Year
2,001 2,002 2,003 2,004 2,005 2,006 2,007 2,008 2,009 2,010 2,011 2,012 2,013 2,014 2,015 2,016 2,017 2,018 2,019 2,020 2,021 2,022 2,023 2,024 2,025
0 1 2 3 4 5 6 7 8 9 10 11 12 13


Nr Citations of Works per Year for Source Group AAAI colored by Nr References
Citations
0
0.5
1
1.5
2
2.5
3
3.5
4
Year
1,978 1,980 1,982 1,984 1,986 1,988 1,990 1,992 1,994 1,996 1,998 2,000 2,002 2,004 2,006 2,008 2,010 2,012 2,014 2,016 2,018 2,020 2,022 2,024 2,026 2,028
1
0.8
0.6
0.4
0.2
0
−0.2


Nr Citations of Works per Year for Source Group IJCAI colored by Nr References
Citations
Year
1.1
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
−0.1
2,004
2,005
2,006
2,007
2,008
2,009
2,010
2,011
2,012
2,013
2,014
2,015
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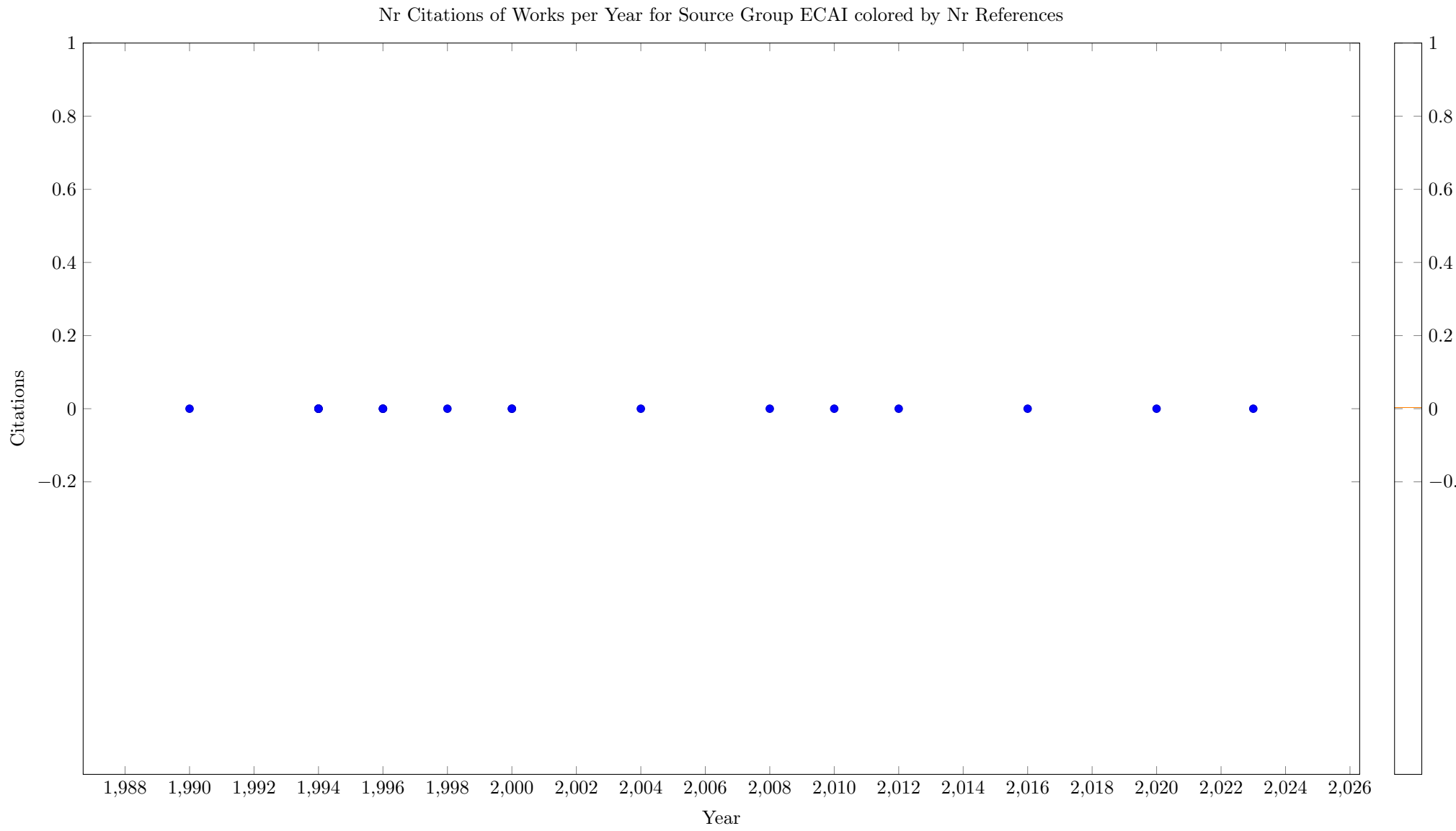
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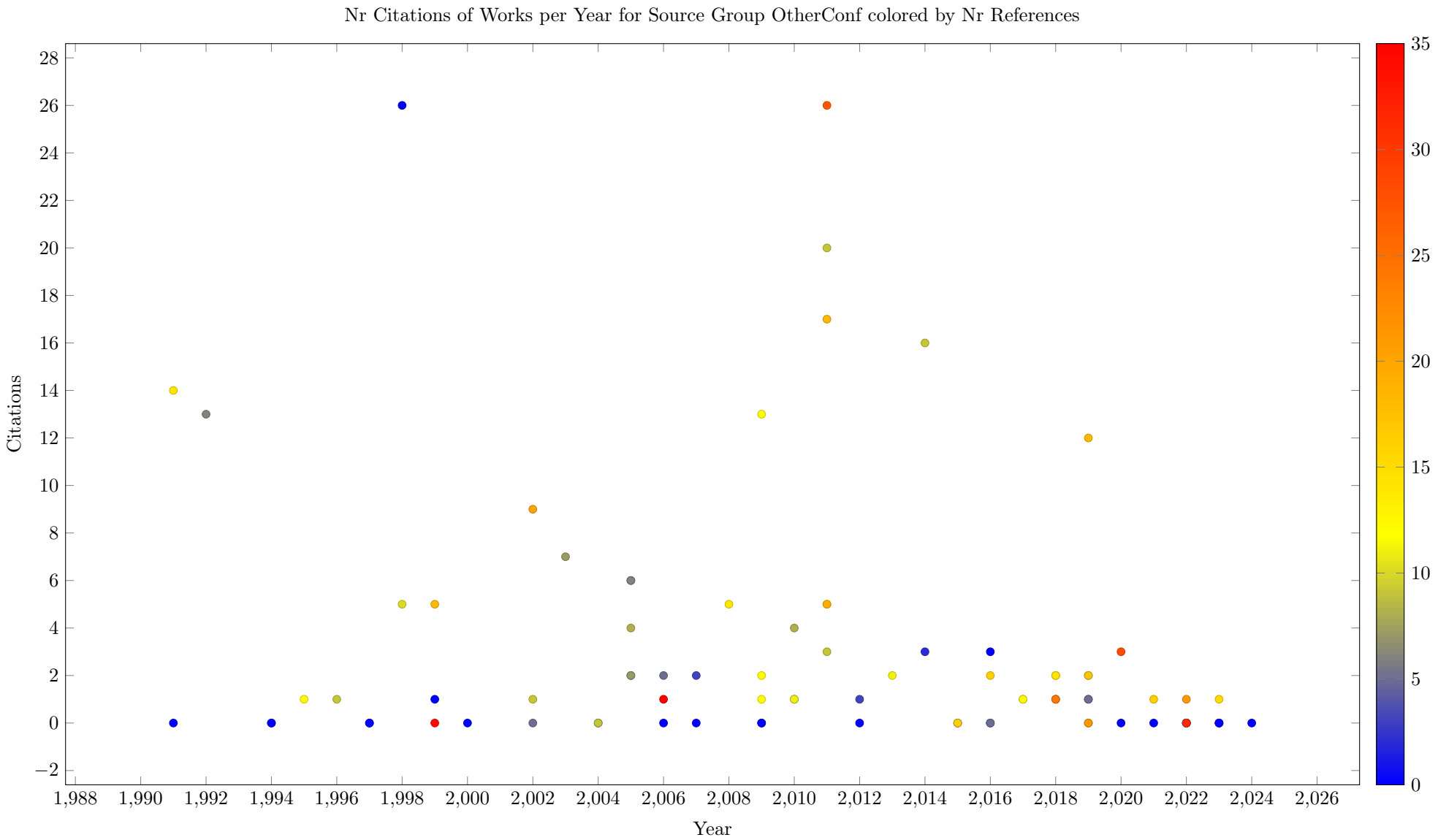
Year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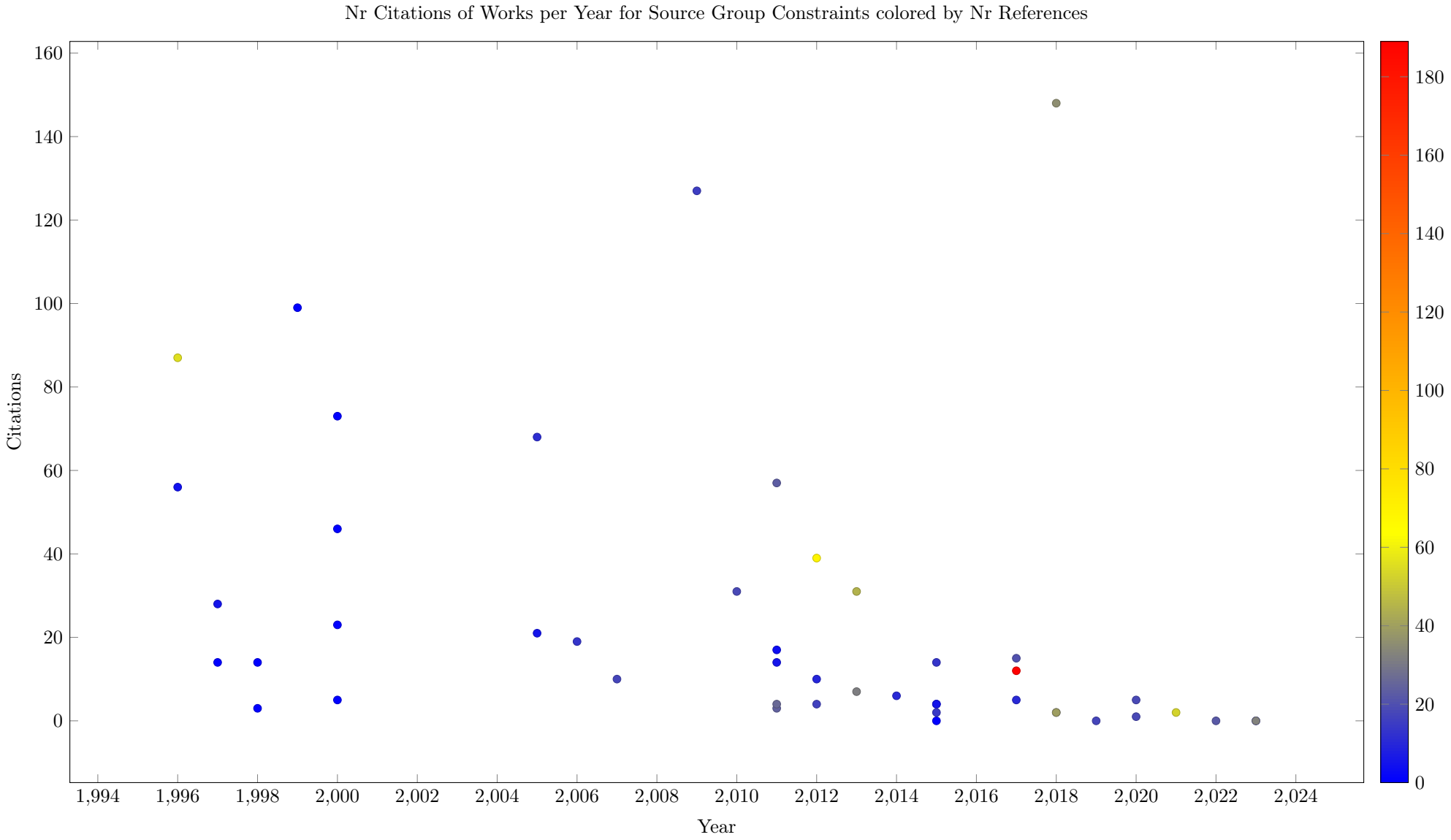
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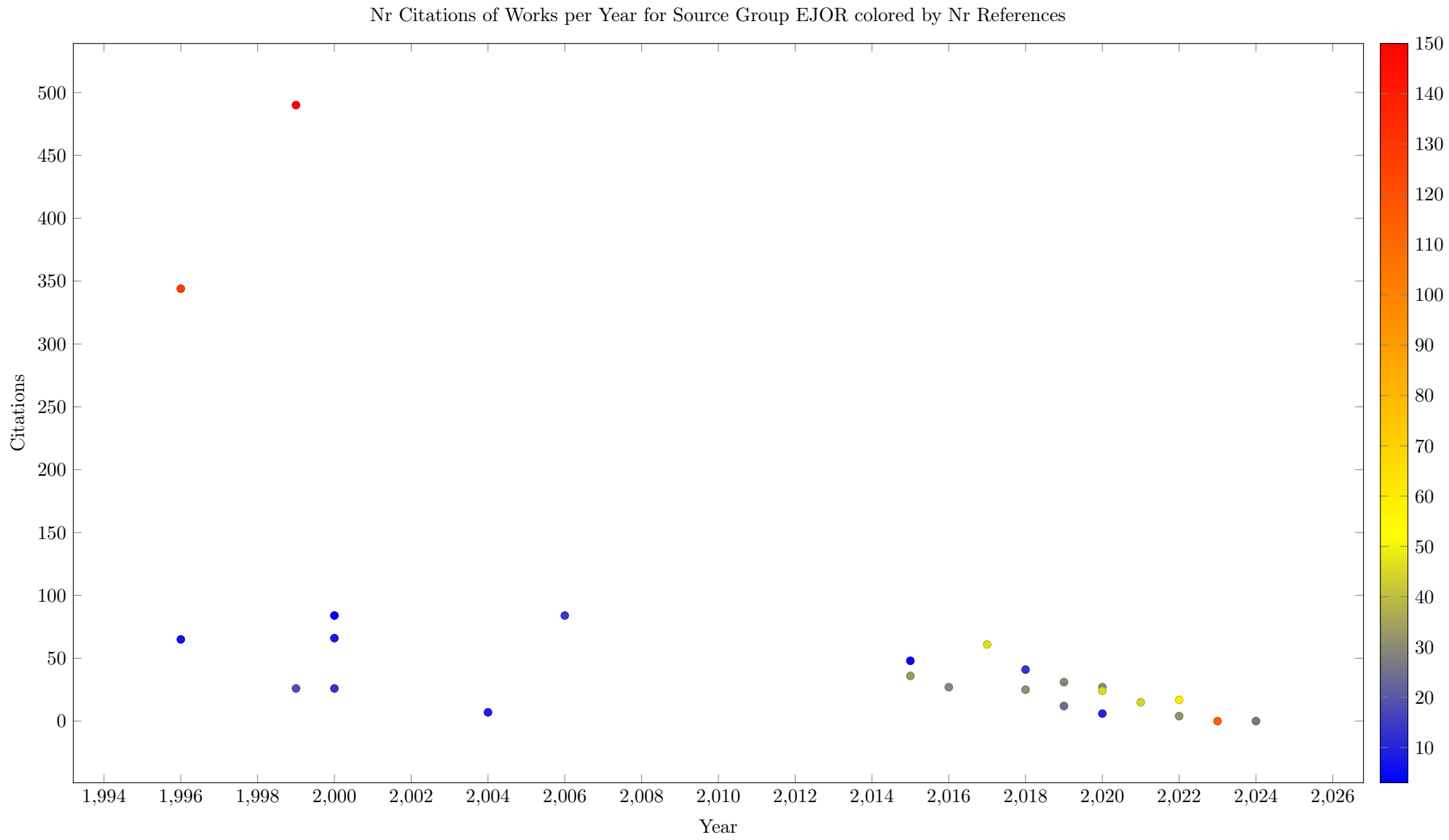
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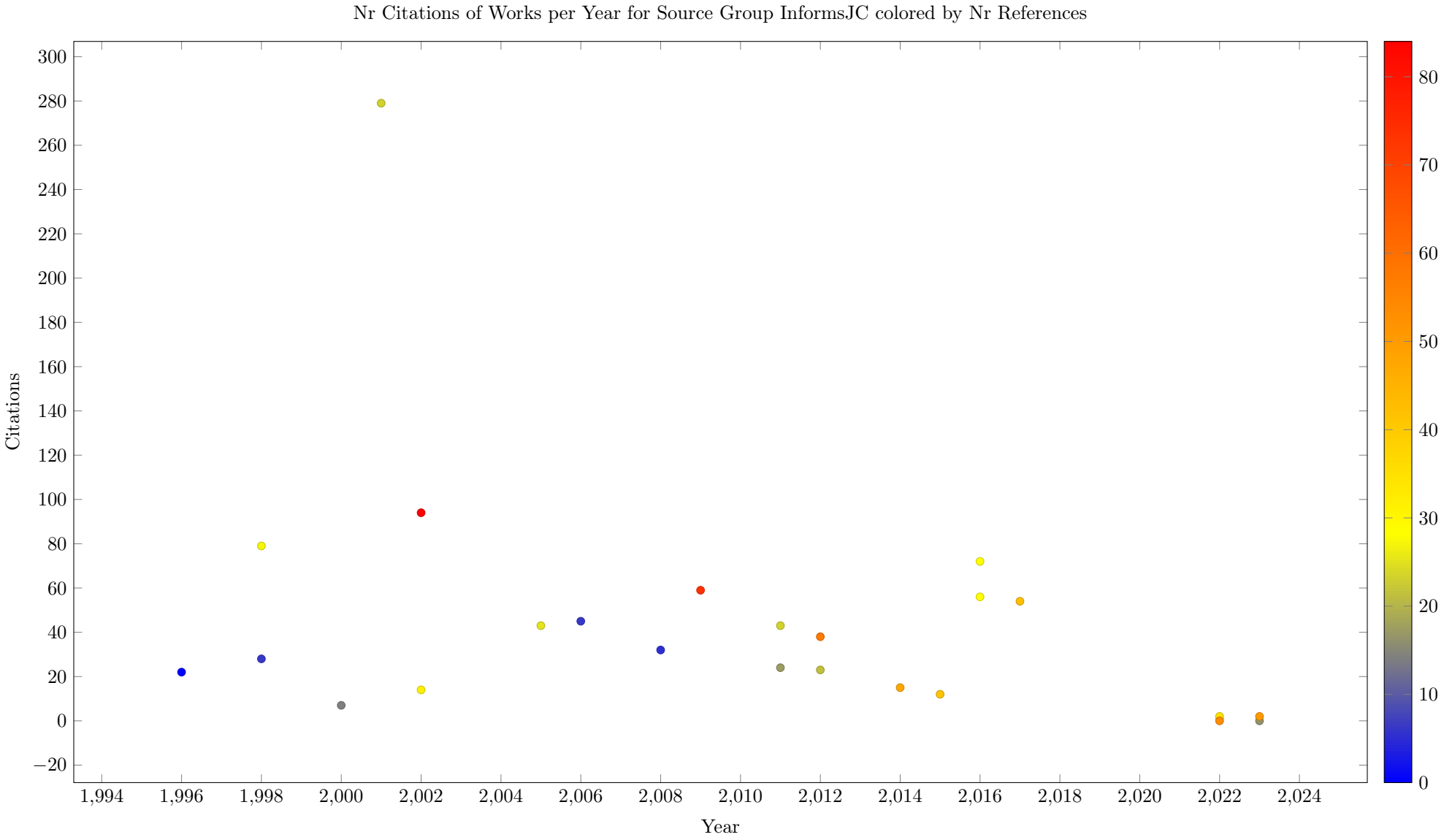
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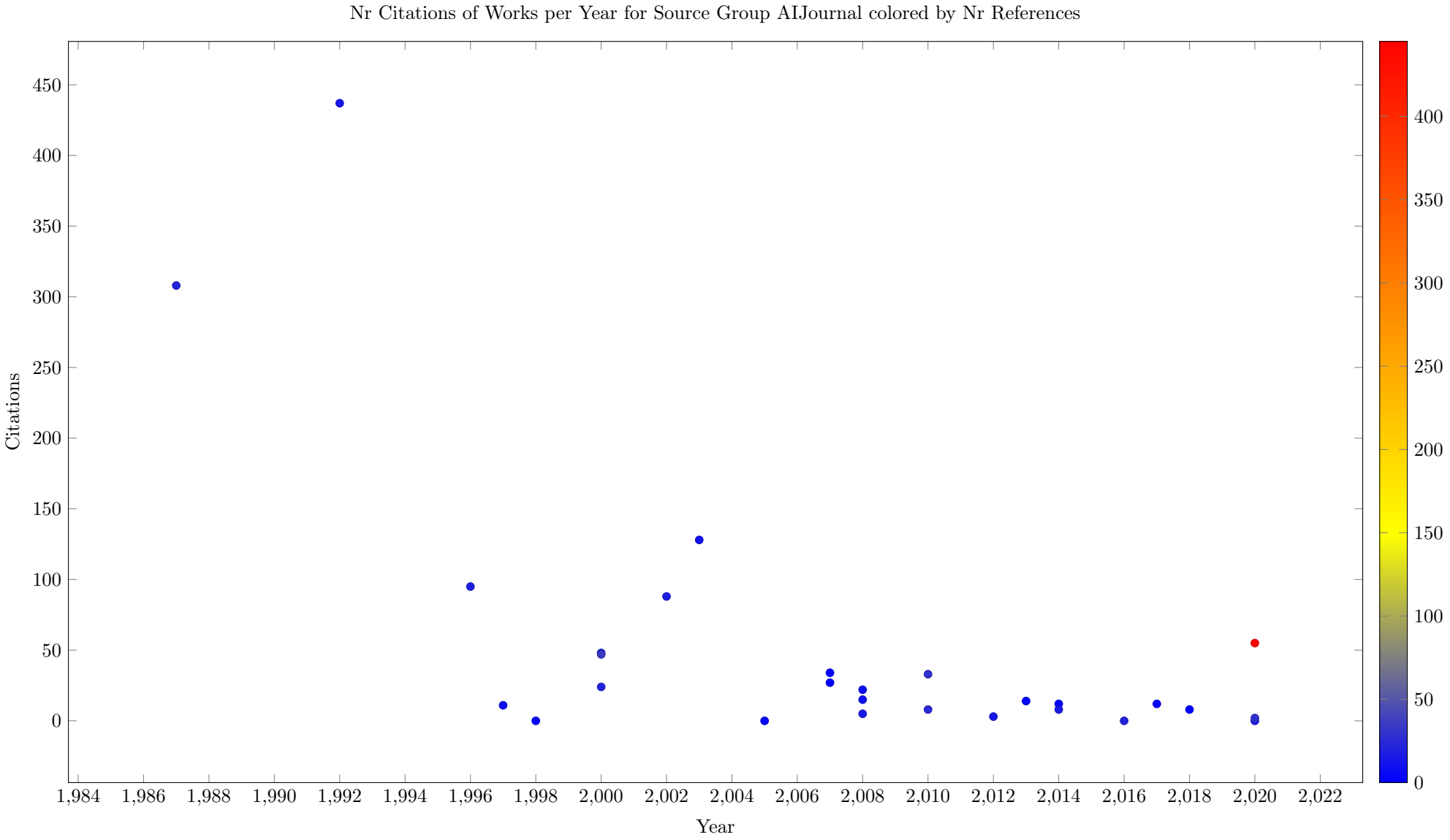
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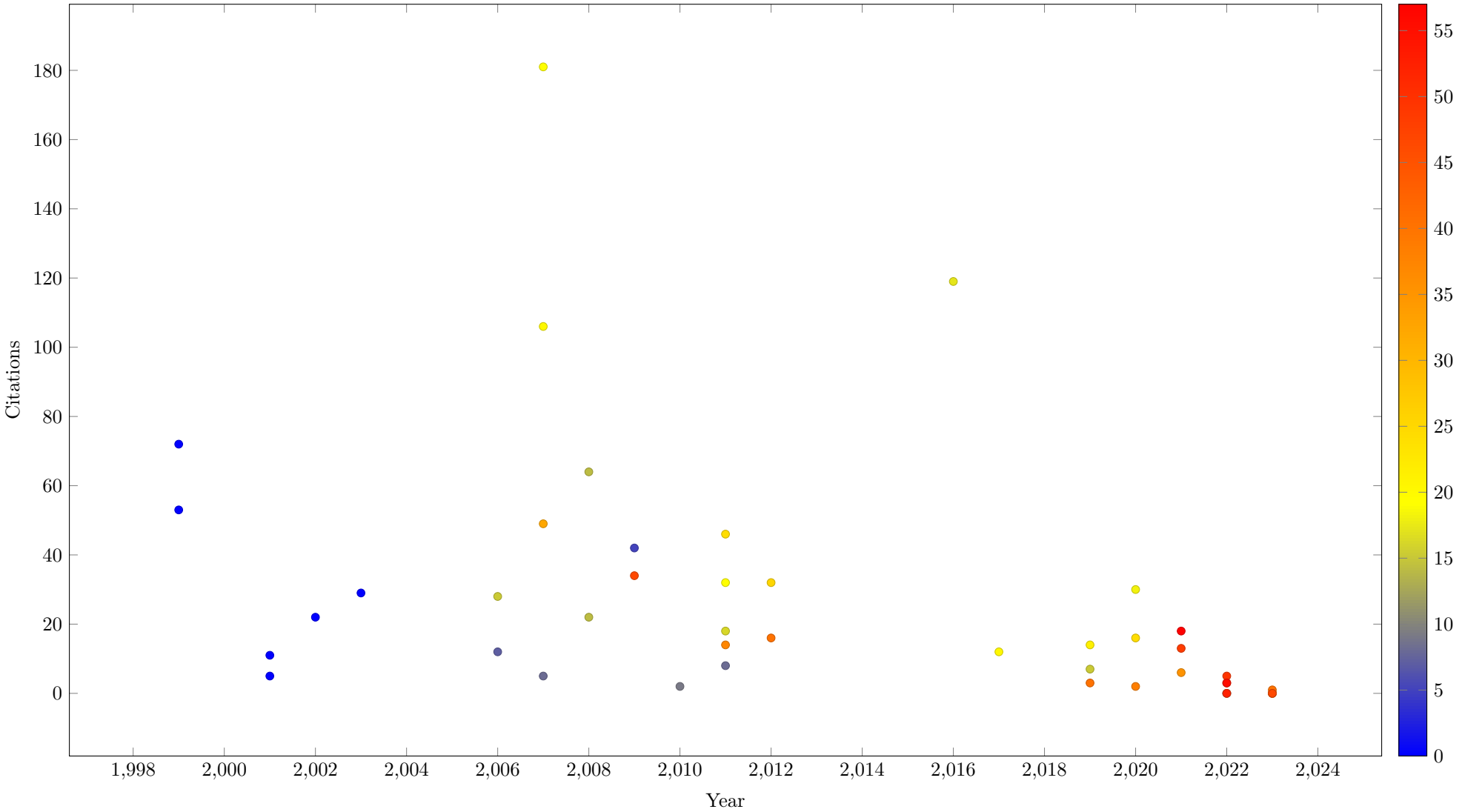

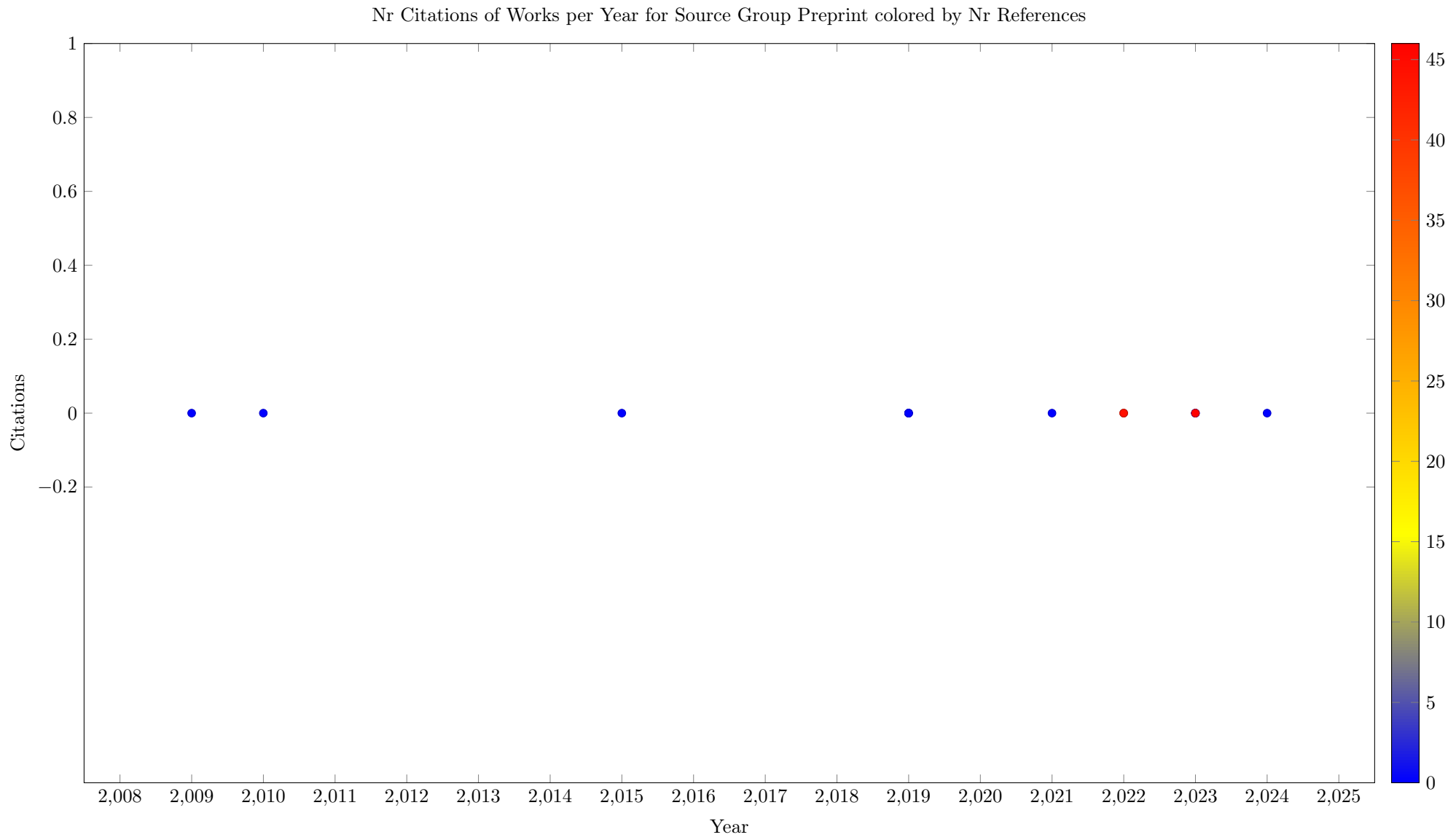
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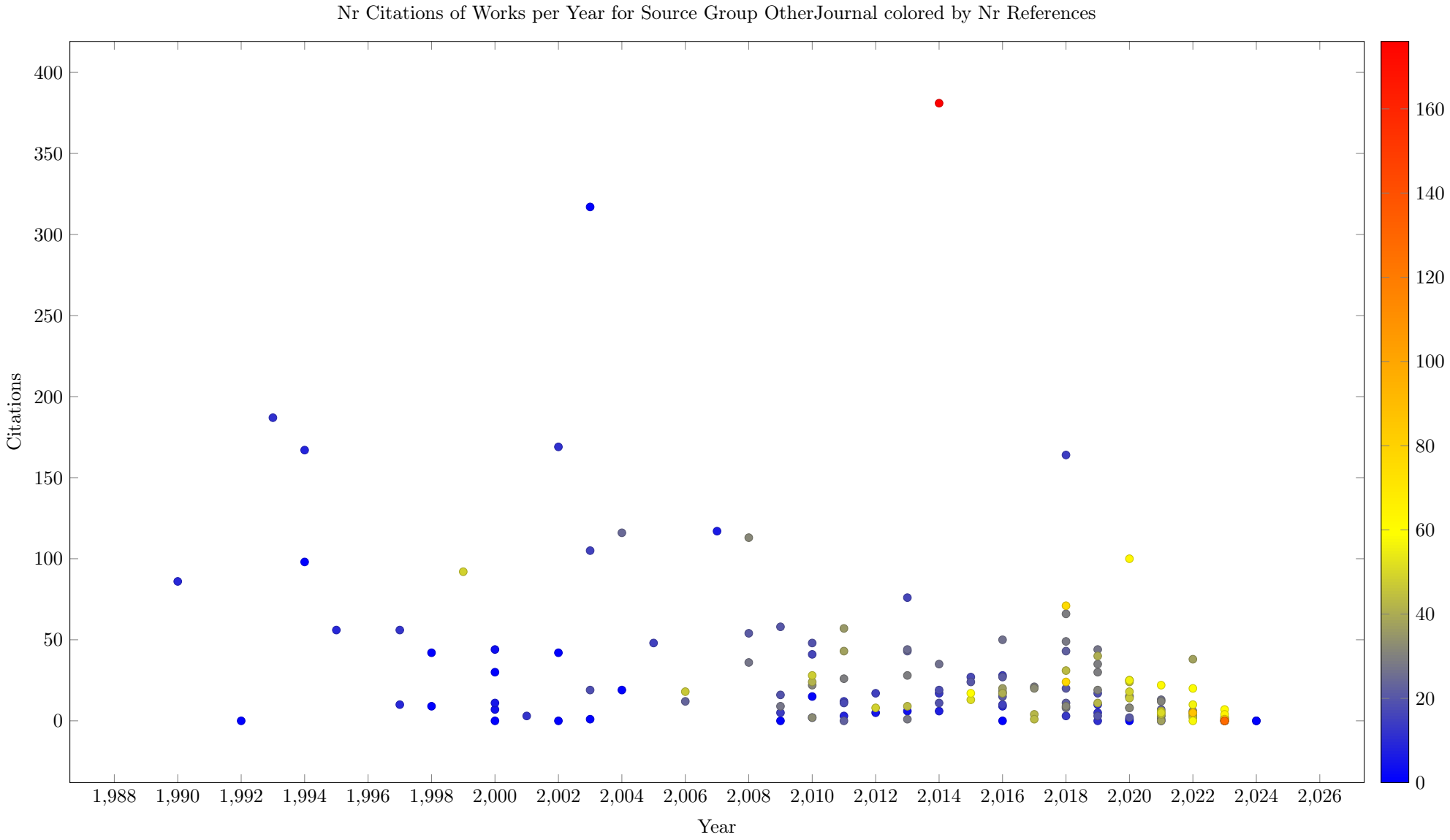
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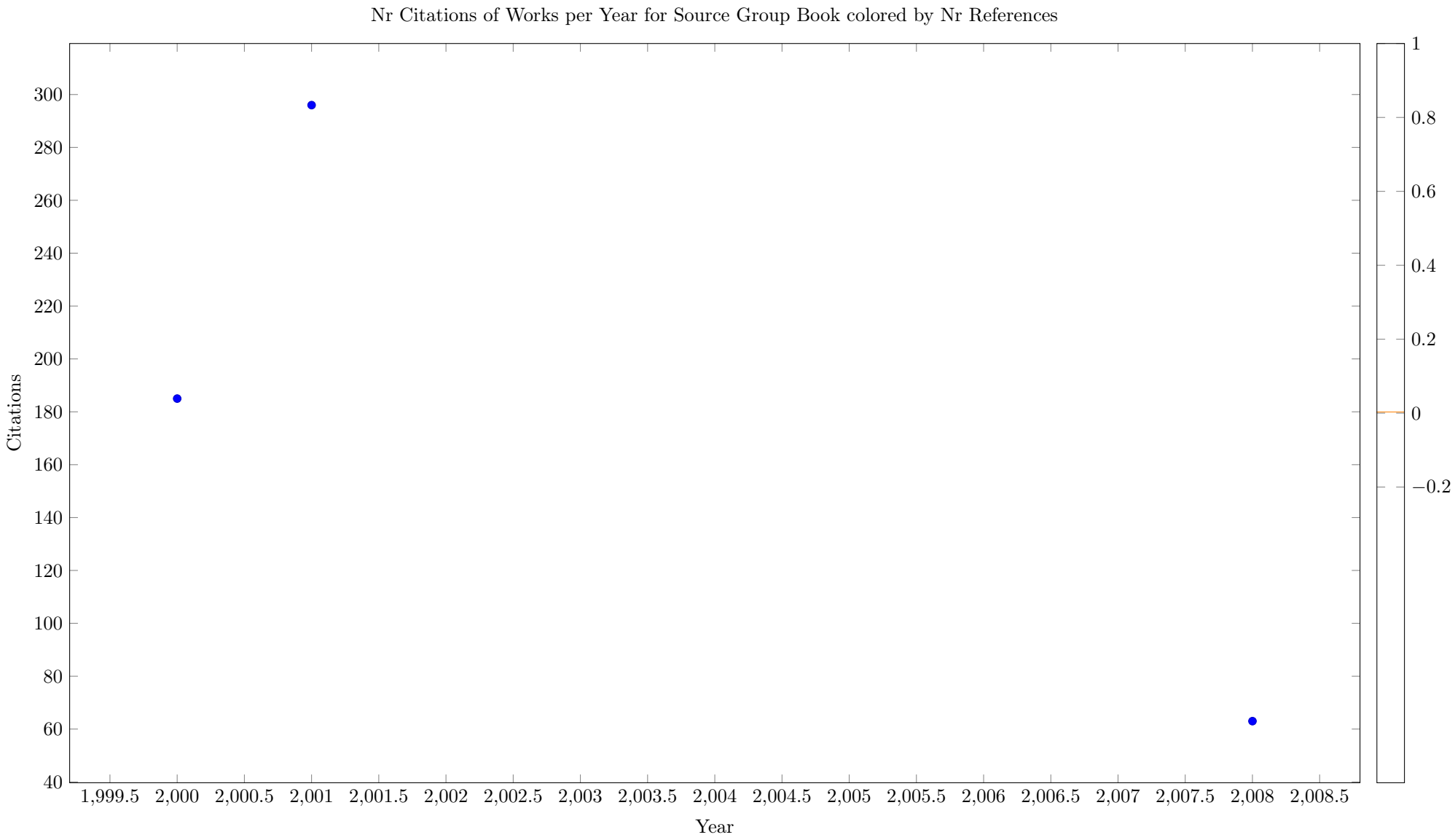
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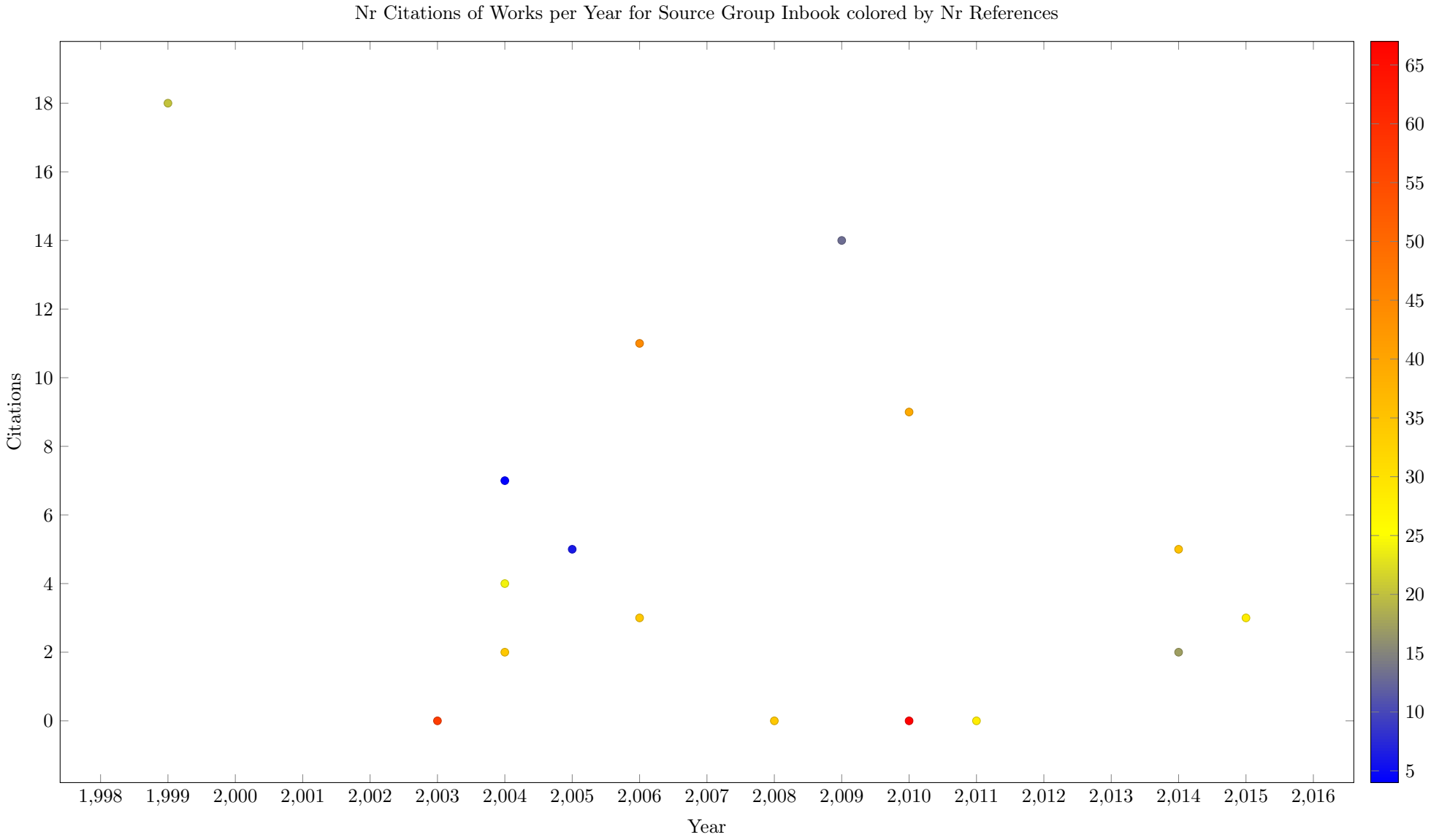
Nr Citations of Works per Year for Source Group Inbook colored by Nr References
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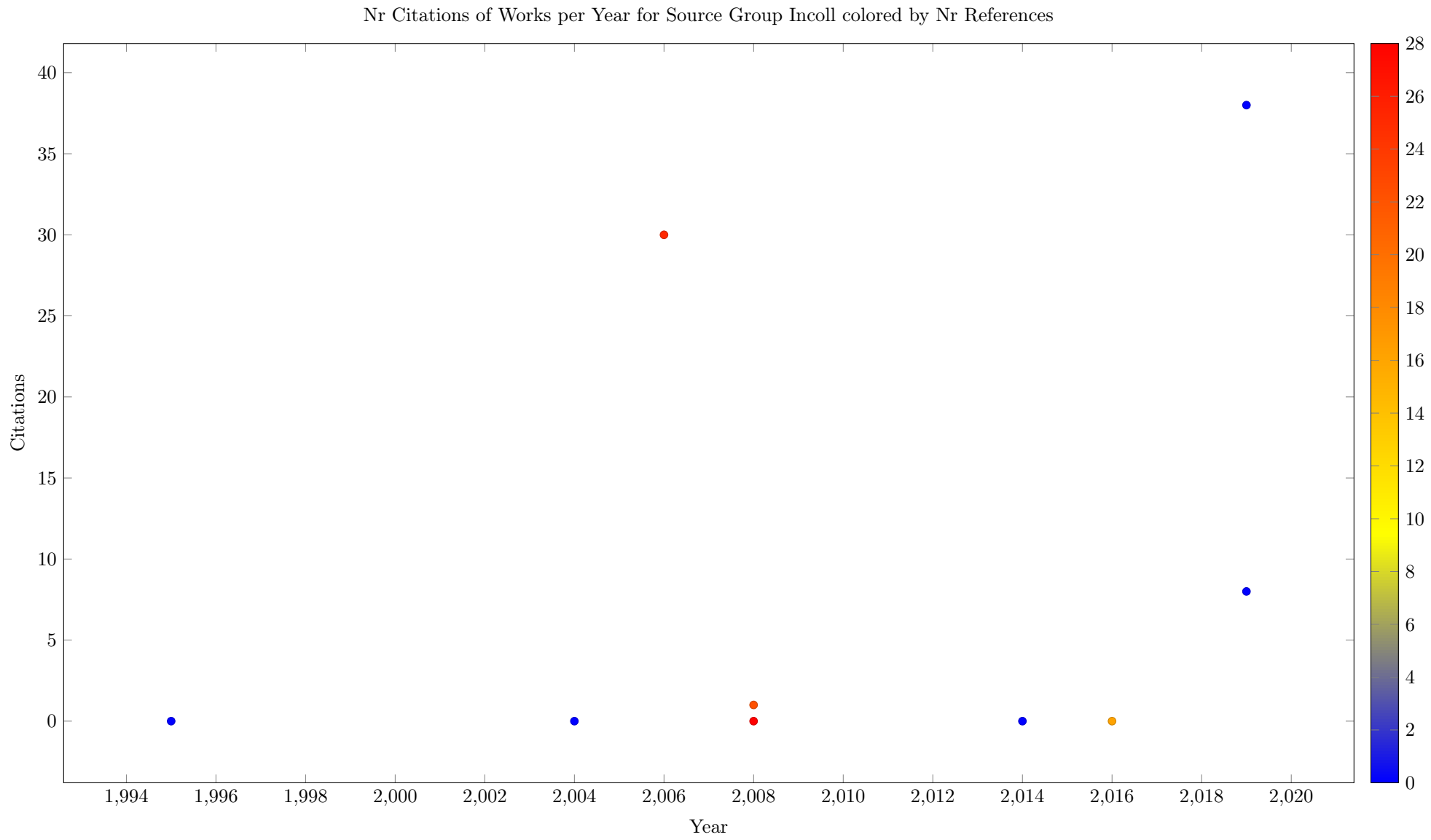
Nr Citations of Works per Year for Source Group Incoll colored by Nr References
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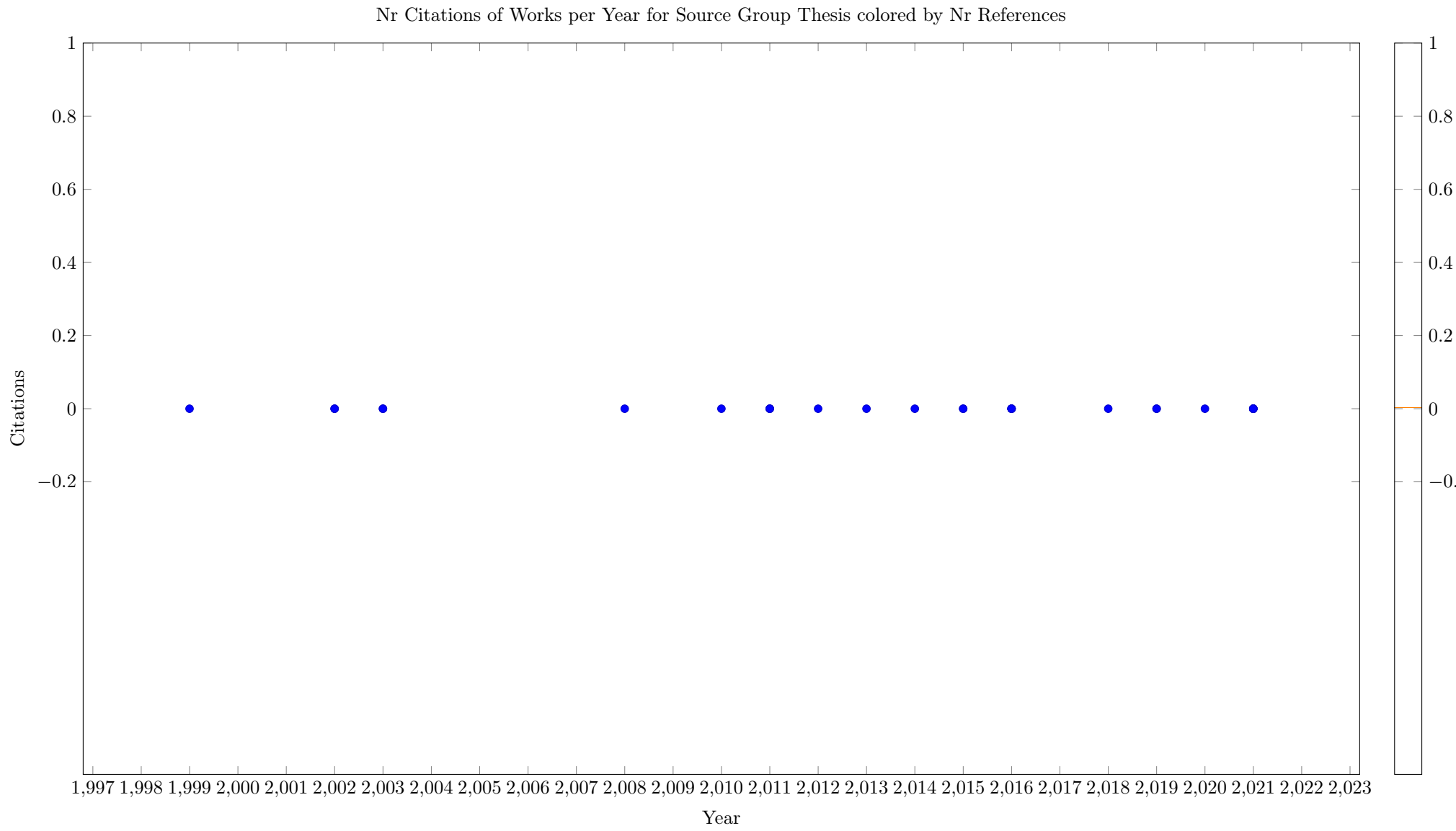
Nr Citations of Works per Year for Source Group Thesis colored by Nr References
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Year

14.2 Reference Flows

Table 8: Reference Flows

	Background	CP	CPAIOR	ICAPS	AAAI	OtherConf	Constraints	EJOR	InformsJC	AIJournal	ORJournal	OtherJournal	Book	Inbook	Incoll
Background	68	15	3				12	7	20	2	10	22	6	3	
CP	127	125	70	2	1	9	41	6	26	22	13	72	27	1	4
CPAIOR	96	110	65	1	1	14	47	10	25	10	20	65	27	2	2
ICAPS	4	3													
OtherConf	40	34	18			3	17	5	11	7	7	46	9	3	
Constraints	61	58	42	1		5	23	3	14	10	13	54	18	2	1
EJOR	55	3	1				10	17	18	4	14	33			1
InformsJC	63	21	11				19	17	26	7	15	34	15		1
AIJournal	32	9	4	1		7	3	8	5	16	3	31	1	1	
ORJournal	73	36	17				29	17	32	15	15	71	8	1	1
Preprint	4						3	11	4		4	8	1		
OtherJournal	173	67	43			5	81	58	70	45	75	266	25	2	4
Inbook	68	16	10			1	14	7	20	3	16	38	9	4	
Incoll	12	2					2	3	1	5	1	2	2		

Table 9: Reference Flows Normalized

	Background	CP	CPAIOR	ICAPS	AAAI	OtherConf	Constraints	EJOR	InformsJC	AIJournal	ORJournal	OtherJournal	Book	Inbook	Incoll
Background	3.85	0.27	0.07				0.62	0.67	1.90	0.17	0.51	0.31	4.76	0.45	
CP	2.31	0.73	0.55	0.08	0.01	0.08	0.68	0.18	0.79	0.60	0.21	0.33	6.87	0.05	0.34
CPAIOR	2.36	0.87	0.69	0.06	0.02	0.16	1.05	0.41	1.03	0.37	0.44	0.40	9.28	0.13	0.23
ICAPS	0.53	0.13													
OtherConf	1.08	0.29	0.21			0.04	0.42	0.23	0.50	0.28	0.17	0.31	3.41	0.21	
Constraints	3.16	0.96	0.94	0.12		0.12	1.09	0.26	1.22	0.78	0.60	0.70	13.04	0.27	0.24
EJOR	5.24	0.09	0.04				0.87	2.72	2.88	0.57	1.19	0.79			0.44
InformsJC	6.00	0.64	0.45				1.65	2.72	4.16	1.00	1.28	0.81	20.00		0.44
AIJournal	2.72	0.25	0.15	0.20		0.28	0.23	1.14	0.71	2.04	0.23	0.66	1.19	0.22	
ORJournal	3.70	0.58	0.37				1.34	1.45	2.72	1.14	0.68	0.90	5.67	0.13	0.24
Preprint	0.60						0.41	2.75	1.00		0.53	0.30	2.08		
OtherJournal	2.47	0.31	0.27			0.03	1.05	1.39	1.68	0.96	0.96	0.95	4.99	0.07	0.27
Inbook	10.12	0.76	0.64			0.07	1.90	1.75	5.00	0.67	2.13	1.42	18.75	1.56	
Incoll	3.17	0.17					0.48	1.33	0.44	1.98	0.24	0.13	7.41		