

*Arximedés is a Research Discovery tool for professional researchers. It is not a social network. Arximedés makes it much easier to sift through today's vast volume of papers, visualize trends and find the top people and research that matches your interests. You can also rate papers (whether published or not) through a simple star system along the lines of "I know it when I see it".*

Currently we are focused on Physical Sciences & Technology, making use of Arxiv and the NASA ADS Bibliographic Database which covers 11mm papers and 4,000 journals.\*

Contact: [dmitry@arximedés.org](mailto:dmitry@arximedés.org) or [niraj@arximedés.org](mailto:niraj@arximedés.org)

---

## CONTENTS

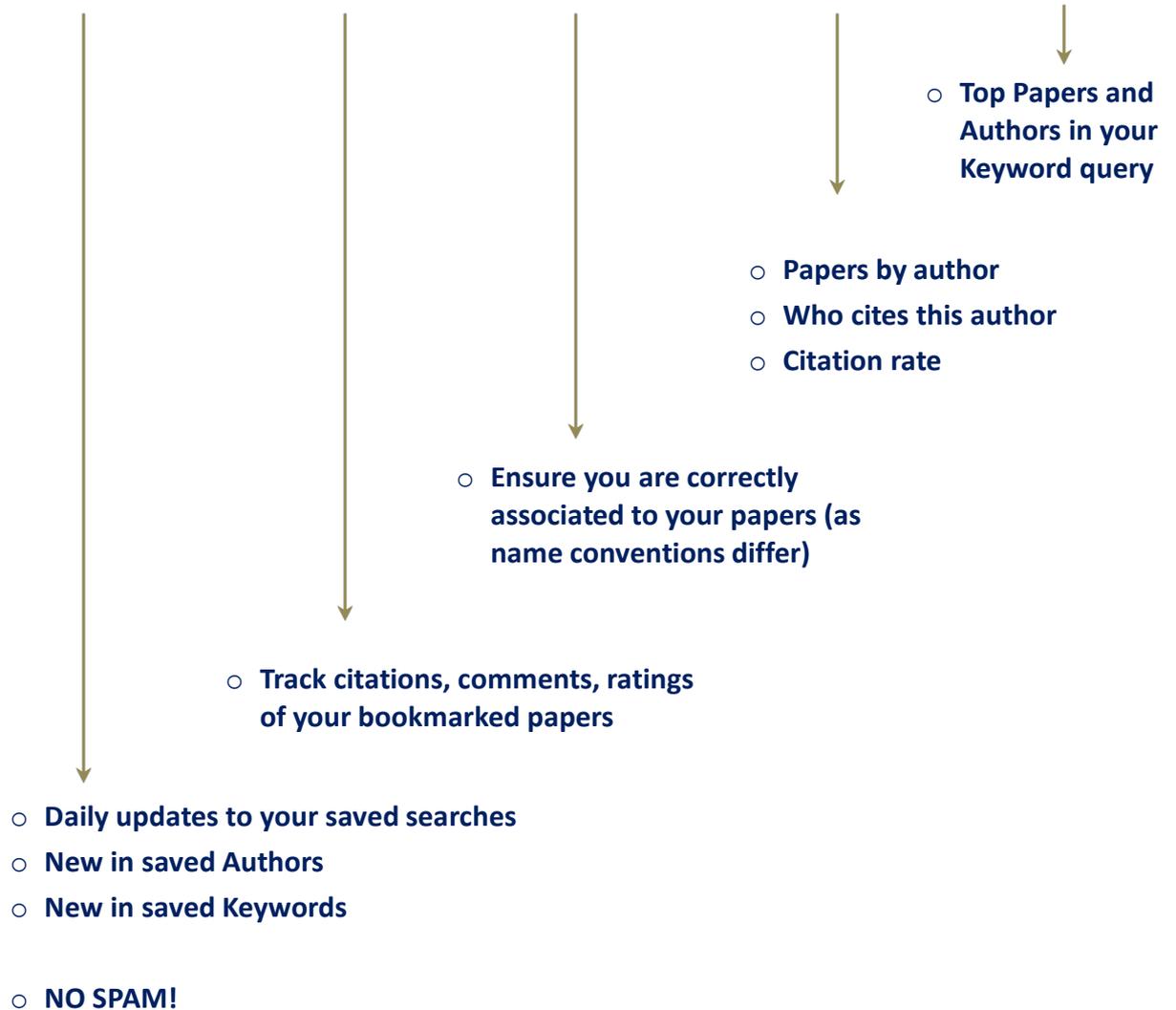
- I. Overview of Functionality
- II. How to Use It
- III. What is the Arximedés Score?

- In addition to the usual sorting by citation or date, all authors and papers have an “Arximedes Score”.
- “Arximedes Score” adjusts for number of co-authors and age of each paper within your search topic.

65 

- Rapid Responses (all postings must be approved by moderator)
- Rate Papers

Your rating: 



# Subject Query: Top Author and Papers

**Example:** *Superconductivity NOT topological.* Focus on traditional superconductivity, excluding references to topological quantum states.

Sort by **Arximedes Score**, Citation Count, Date, etc.

## TOP AUTHORS WITHIN YOUR SEARCH

Select Author(s) to filter them on right

Filter theoretical vs. experimental papers by setting cutoff for number of co-authors.

Citations vs. Paper Age.

**TOP PAPERS**  
Link to abstract on Arxiv, NASA and Journal sites\*

arXimedes Patent Pending Newsfeed [2] Bookmark My Profile Q Author Q Subject Log out

top ins majorana supercond not top spec heat test

RESULTS FOR superconductivity NOT topological

superconductivity NOT topological Search

Retrieve Affiliations & Abstracts

Show papers with **less** than  authors

Refine search by range of time Start Yr:  End Yr:

Sort by **Score**

Top Authors in Subject

Anderson, P. **100**

Joseph Henry Laboratories of Physics, Princeton University Princeton, New Jersey 08544 USA

10675 CITATIONS 7 PAPER(S) ALL PAPER(S) LATEST CITATION

Tokura, Y. **71**

Department of Applied Physics, University of Tokyo, Hongo, Bunkyo-ku, Tokyo, 113, Japan

6969 CITATIONS 6 PAPER(S) ALL PAPER(S) LATEST CITATION

Singh, D. **70**

Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37831-6114, USA

3018 CITATIONS 3 PAPER(S) ALL PAPER(S) LATEST CITATION

Bednorz, J. **65**

IBM Forschungslaboratorium, Rueschlikon, Switzerland

8056 CITATIONS 3 PAPER(S) ALL PAPER(S) LATEST CITATION

Dagotto, E. **57**

Department of Physics, National High Magnetic Field Laboratory, and MARTECH, Florida State University, Tallahassee, Florida 32306

3559 CITATIONS 3 PAPER(S) ALL PAPER(S) LATEST CITATION

Du, M. **57**

Materials Science and Technology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee 37831-6114, USA

Page 1 of 38 >

Citation History

6,000 -  
9,500 -  
6,000 -  
4,500 -  
3,000 -  
2,500 -  
1,500 -  
1,000 -  
500 -  
0

The resonating valence bond state in La2CuO4 and superconductivity  
Anderson, P.

1960 1970 1980 1990 2000

Date published

Top Papers Sort by **Score**

The resonating valence bond state in La2CuO4 and superconductivity

Anderson, P. W. **88**

JOURNAL ARXIV NASA

5042 CITATIONS 1 NUM OF ALL PAPER(S) 1987-03 PUBLISHED

Rate & Respond

The resonating valence bond state and high-Tc superconductivity — A mean field theory

Basikaran, G., Anderson, P. W., Zou, Z. **16**

JOURNAL ARXIV NASA

874 CITATIONS 3 NUM OF ALL PAPER(S) 1987-09 PUBLISHED

Rate & Respond

Hard Superconductivity: Theory of the Motion of Abrikosov Flux Lines

Anderson, P. W., Kim, Y. B. **13**

JOURNAL ARXIV NASA

1145 CITATIONS 2 NUM OF ALL PAPER(S) 1964-01 PUBLISHED

Rate & Respond

Page 1 of 1 >

\* Arximedes does not search, store or make available full text articles. Access to full text is governed by the sites above.

RESULTS FOR: **Read, N.**  
Affiliation:  
Email:  
Website:

Exact Match Retrieve Affiliations & Abstracts  
Show papers with  than  authors

**Co-Authors** Cited by

Sort by

Co-authors

<input checked="" type="checkbox"/>	<b>Sachdev, S.</b>	2383 CITATIONS	19 PAPERS/W AUTHOR	2004-11 LATEST CITATION
<input checked="" type="checkbox"/>	<b>Rezayi, E.</b>	940 CITATIONS	12 PAPERS/W AUTHOR	2012-12 LATEST CITATION
<input checked="" type="checkbox"/>	<b>Lee, P.</b>	1202 CITATIONS	6 PAPERS/W AUTHOR	1990-09 LATEST CITATION
<input checked="" type="checkbox"/>	<b>News, D.</b>	1176 CITATIONS	8 PAPERS/W AUTHOR	1987-11 LATEST CITATION
<input checked="" type="checkbox"/>	<b>Saleur, H.</b>	324 CITATIONS	12 PAPERS/W AUTHOR	2013-12 LATEST CITATION
<input checked="" type="checkbox"/>	<b>Kane, C.</b>	852 CITATIONS	3 PAPERS/W AUTHOR	1990-09 LATEST CITATION
<input checked="" type="checkbox"/>	<b>Dubail, J.</b>	76 CITATIONS	4 PAPERS/W AUTHOR	2013-07 LATEST CITATION
<input checked="" type="checkbox"/>	<b>Givin, S.</b>			

**Citations vs Paper Age**

Paired states of fermions in two...  
Green, Dmitry Read, N.

**Papers** Sort by

**Large-N expansion for frustrated quantum antiferromagnets**

Sachdev, Subir, Read, N. 30 [Progress Bar]  
467 CITATIONS 2 NUM OF AUTHORS 1991-04 PUBLISH DATE Rate & Respond

**Valence-bond and spin-Peierls ground states of low-dimensional quantum antiferromagnets**

Sachdev, Subir, Read, N. 27 [Progress Bar]  
439 CITATIONS 2 NUM OF AUTHORS 1989-04 PUBLISH DATE Rate & Respond

**Spin-Peierls, valence-bond solid, and Néel ground states of low-dimensional quantum antiferromagnets**

Sachdev, Subir, Read, N. 19 [Progress Bar]

Click **CITED BY** to see who cites this author

Due to different name conventions across journals, you may need to play with the name query: try spelling the first name and/or selecting Exact Match.

**CO-AUTHORS OR WHO CITES**

**AUTHOR'S PAPERS**

Assign simple star rating quickly.



Rapid Response: All comments must be approved by moderator.



arximedes Patent Pending Newsfeed [2] Bookmark My Profile Q Author Q Subject Logout

**Paired states of fermions in two dimensions with breaking of parity and time-reversal symmetries and the fractional quantum Hall effect**  
Dmitry Green, Read, N.

JOURNAL ARXIV NASA 

1066 CITATIONS 2 NUM OF AUTHORS 2000-04 PUBLISH DATE

Your rating:  +Bookmark

Who Cites Paper Sort by Citations HI LO

**Wen, X.**  
Perimeter Institute for Theoretical Physics, Waterloo, Ontario, Canada N2L 2Y5 and Department of Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA

186 NUM TIMES CITED 2014-01 LATEST CITATION

**Chen, X.**  
Department of Physics, University of California, Berkeley, California 94720, USA; Department of Physics, Massachusetts Institute of Technology, Cambridge, Massachusetts 02139, USA

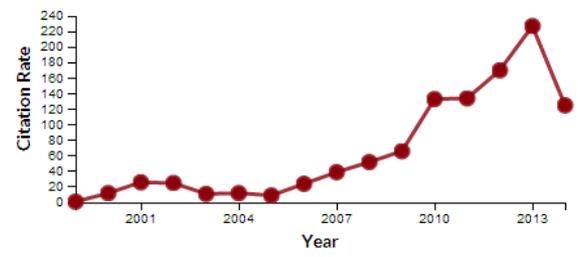
167 NUM TIMES CITED 2014-01 LATEST CITATION

**Liu, Z.**  
Department of Electrical Engineering, Princeton University, Princeton, New Jersey 08544, USA; Beijing Computational Science Research Center, Beijing 100084, China

157 NUM TIMES CITED 2013-11 LATEST CITATION

**Gu, Z.**

**Citation rate**



Year	Citation Rate
2001	0
2002	20
2003	10
2004	15
2005	25
2006	35
2007	45
2008	55
2009	65
2010	140
2011	135
2012	220
2013	120

**Rapid Responses**

Title

Comment

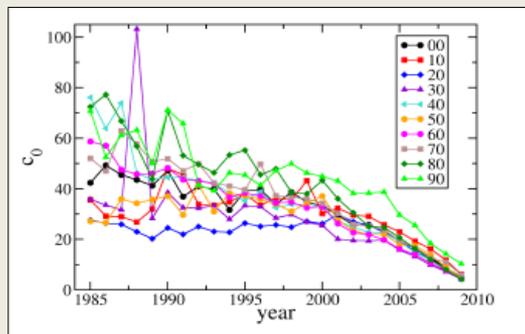
Note: Comments must be approved by moderator

Post

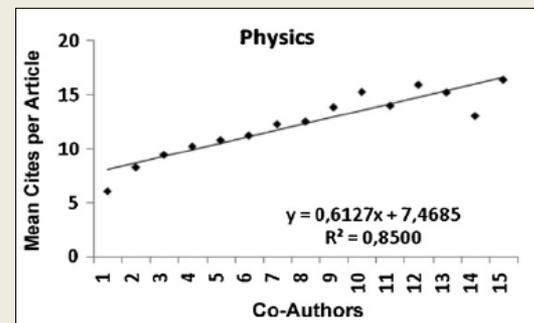
## Goal: to prioritize authors or papers within your search topic.

- Simple citation count does not capture **two key factors**. First, citations tend to accumulate with paper age all else being equal [1]. Second, citations generally increase with the number of authors per paper. Hence, an author should not receive full credit for citations, although the credit decreases more slowly than a simple  $1/N$  scaling [2].
- We define two scores. **Arximedes Score for an Author**: composite for all papers by the author, with all citation counts adjusted by number of co-authors per paper and age of paper. **Arximedes Score for a Paper**: number of citations adjusted for age of paper. The max score in each search is normalized to **100**.
- The Arximedes Score is **computed on-the-fly** by aggregating within the **subset of papers** which are the result of your custom keyword (or author) search. Therefore, sorting by this score identifies the most impactful authors or papers within a given topic.

Average number of cites per paper vs. publication year for different disciplines in physics [1]



Average number of cites per paper vs. number of co-authors [2]



*Note on h-index:* this common measure has been shown to be highly correlated to  $0.5^*(\text{Citations})^{1/2}$ , hence redundant and we do not use it [3].

[1] F. Radicchi and C. Castellano, Physical Review E **83**, 046116 (2011) <http://arxiv.org/abs/1012.5314>

[2] E.S. Vieira and J.A.N.F. Gomes, *Journal of Infometrics*, **4** (2010) 1-13

[3] H.C. Spruit (2012) <http://arxiv.org/abs/1201.5476>. J.E. Hirsch (2005) <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1283832/>