

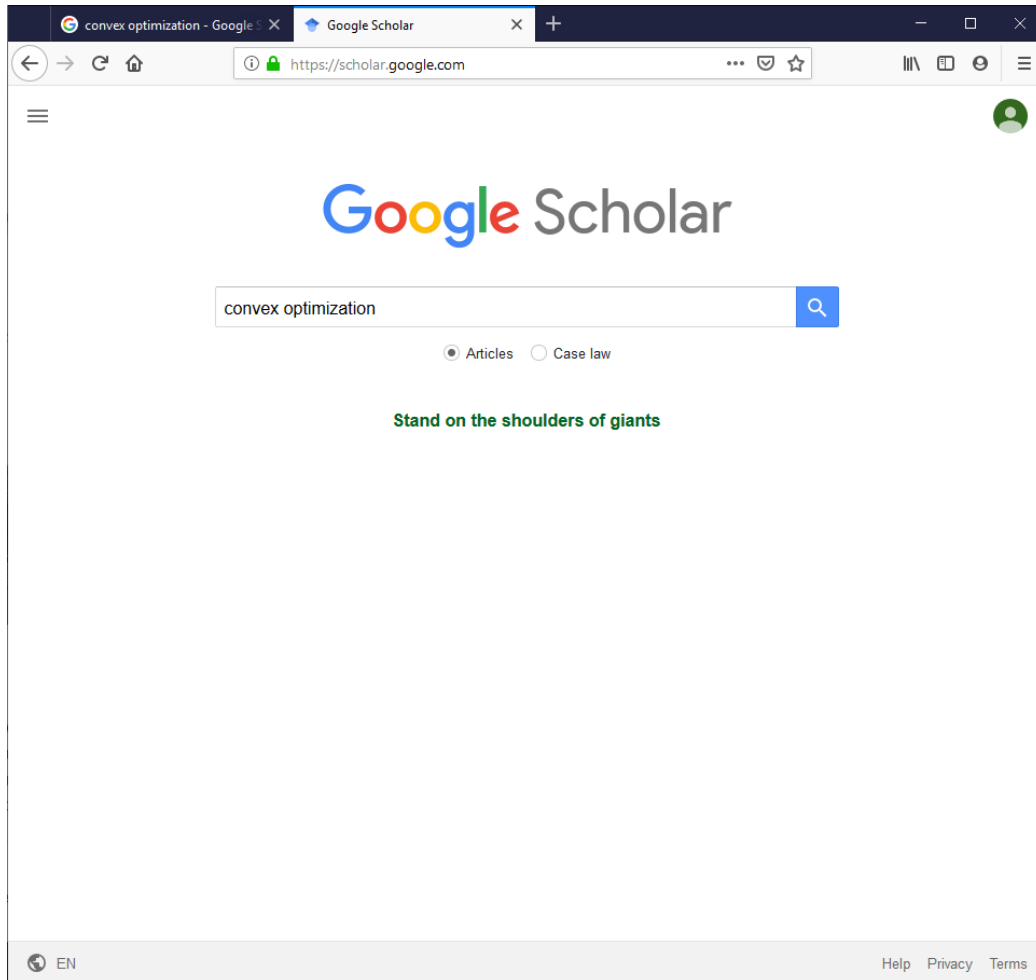
How to do research.

I have 3 basic rules for doing good research.

1. **Use Google Scholar**, and search for **peer-reviewed** papers using **keywords**.
2. **Find papers** with the **highest number of citations** (other researchers referencing that paper).
3. **Look-up the primary author** of that paper to see if they are excellent in their field and therefore reliable. **h-factor** is the metric I use (in Google Scholar).

The following slides will show you an example of this process to find a good paper or book in **3 easy steps**. Don't waste your valuable time "googling" for other sources.





Welcome to Google Scholar!
Your research for good articles
should start here!

What is **most important** for
your research is to find **peer-
reviewed publications**. This
yields higher quality and more
accurate publications than
blogs or news articles.

Lets look at Convex
Optimization for this example.

convex optimization - Google

convex optimization - Google

https://scholar.google.com/scholar?hl=en&as_sdt=0%

convex optimization

Scholar About 2,260,000 results (0.07 sec)

[BOOK] **Convex optimization** [PDF] google.com
 S. Boyd, L. Vandenberghe - 2004 - books.google.com
 Convex optimization problems arise frequently in many different fields. This book provides a comprehensive introduction to the subject, and shows in detail how such problems can be solved numerically with great efficiency. The book begins with the basic elements of convex ...
 ☆ 99 Cited by 47600 Related articles All 37 versions

[BOOK] **Lectures on convex optimization**
 Y. Nesterov - 2018 - Springer
 Aims and Scope **Optimization** has been expanding in all directions at an astonishing rate during the last few decades. New algorithmic and theoretical techniques have been developed, the diffusion into other disciplines has proceeded at a rapid pace, and our knowledge of all aspects ...
 ☆ 99 Cited by 4100 Related articles All 10 versions

Exact matrix completion via convex optimization [PDF] springer.com
 E. J. Candès, B. Recht - Foundations of Computational mathematics, 2009 - Springer
 We consider a problem of considerable practical interest: the recovery of a data matrix from a sampling of its entries. Suppose that we observe m entries selected uniformly at random from a matrix M . Can we complete the matrix and recover the entries that we have not seen ...
 ☆ 99 Cited by 4265 Related articles All 43 versions

Robust convex optimization [PDF] jstor.org
 A. Ben-Tal, A. Nemirovski - Mathematics of operations ..., 1998 - pubsonline.informs.org
 We study **convex optimization** problems for which the data is not specified exactly and it is only known to belong to a given uncertainty set U , yet the constraints must hold for all possible values of the data from U . The ensuing **optimization** problem is called robust ...
 ☆ 99 Cited by 2444 Related articles All 22 versions

Related searches

boyd convex optimization convex optimization linear matrix inequalities
 robust convex optimization convex optimization cambridge press
 convex optimization algorithms lectures on modern convex optimization
 convex optimization lectures convex optimization tutorial

CVX: Matlab software for disciplined **convex** programming
 M. Grant, S. Boyd, Y. Ye - 2008 - cvxr.com
 ... Version 2.1, December 2018, Build 1127. New: Professor Stephen Boyd recently recorded a video introduction to CVX for Stanford's **convex optimization** courses. Click here to watch it ... Give it a try! CVX is a Matlab-based modeling system for **convex optimization**.

This book has 47,600 research papers and books who have cited this authors book.
Wow!!!

In most cases, a value above 40 is good.

convex optimization - Google | convex optimization - Google | Stephen Boyd - Google Scholar | +

https://scholar.google.com/citations?user=GExyIRkAAAAJ&hl=en&oi=sra

Google Scholar

Stephen Boyd [FOLLOW](#) [GET MY OWN PROFILE](#)

Professor of Electrical Engineering, Computer Science, and Management Science, [Stanford](#)
Verified email at stanford.edu - [Homepage](#)
[Optimization](#) [Control](#) [Signal Processing](#) [Artificial Intelligence](#) [Finance](#)

| TITLE | CITED BY | YEAR |
|---|----------|------|
| Convex Optimization S Boyd, L Vandenberghe Cambridge University Press | 47604 | 2004 |
| Linear matrix inequalities in system and control theory S Boyd, L El Ghaoui, E Feron, V Balakrishnan Philadelphia, USA: SIAM 15 | 23303 | 1994 |
| Distributed optimization and statistical learning via the alternating direction method of multipliers S Boyd, N Parikh, E Chu, B Peleato, J Eckstein Foundations and Trends® in Machine learning 3 (1), 1-122 | 10295 | 2011 |
| CVX: Matlab software for disciplined convex programming M Grant, S Boyd, Y Ye | 8351 * | 2008 |
| Semidefinite programming L Vandenberghe, S Boyd SIAM review 38 (1), 49-95 | 4680 | 1996 |
| Enhancing Sparsity by Reweighted l1 Minimization EJ Candes, MB Wakin, SP Boyd | 3806 * | 2007 |
| Fast linear iterations for distributed averaging L Xiao, S Boyd Systems & Control Letters 53 (1), 65-78 | 2328 | 2004 |
| Proximal Algorithms N Parikh, SP Boyd Foundations and Trends in optimization 1 (3), 127-239 | 2311 | 2014 |
| Graph implementations for nonsmooth convex programs MC Grant, SP Boyd | 2238 | 2008 |

Cited by [VIEW ALL](#)

| | All | Since 2014 |
|-----------|--------|------------|
| Citations | 158659 | 38424 |
| h-index | 112 | 75 |
| i10-index | 373 | 257 |

Bar chart showing citations from 2012 to 2019:

| Year | Citations |
|------|-----------|
| 2012 | ~10000 |
| 2013 | ~11000 |
| 2014 | ~12000 |
| 2015 | ~13000 |
| 2016 | ~14000 |
| 2017 | ~15000 |
| 2018 | ~16000 |
| 2019 | ~14000 |

Co-authors [VIEW ALL](#)

- [Lieven Vandenberghe](#) UCLA
- [Seung-Jean Kim](#)
- [Eric Feron](#) Professor of Aerospace Engineer...
- [Laurent El Ghaoui](#) UC Berkeley (EECS, IEOR)
- [Michael C. Grant](#) CVX Research, Anaconda (forme...

After 20 years a "successful scientist" would have an h-index of 20, an "outstanding scientist" would have an h-index of 40, and a "truly unique" individual would have an h-index of 60.

Dr. Boyd has a staggering h-factor=112!!!

By the way, he is THE BEST resource on all things related to convex optimization, and his book "Convex Optimization" is regarded as the primary technical publication on this subject.