How to calculate your h index

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What is the “h index”? 

- It is a measure of “whole career” citation volume, allowing a measure of a person’s across-career research impact, addressing the question of how many papers they have published which have attracted significant citation volumes from other researchers.
- Career citation volume alone can distort a sense of a person’s overall research contribution if a few papers are heavily cited but most are not.
- Simply, an h factor of 10 means that a person has 10 publications which have been cited at least 10 times; h=20, means 20 publications which have been cited at least 20 times etc.
Benchmarks

• JE Hirsch, the author of the h index says:
• “an h index of 20 after 20 years of scientific activity characterizes a successful scientist”
• “an h index of 40 after 20 years of scientific activity characterizes outstanding scientists likely to be found only at the top universities or major research laboratories”
• “an h index of 60 .. after 20 years …characterizes truly unique individuals”

Hirsch JE. An index to quantify and individual’s scientific research output. PNAS 2005;102:16569-72
Is it unflattering to early career researchers?

• Higher h indexes are better, but it will be rare for early career researchers to have high scores. This is why we will ask you to provide the number of research-active years you have had since your first publication, so that we can weight your scores by active research years.

• Remember: of 38 million items cited from 1900-2005, only 0.5% have been cited > 200 times. Half of all articles published are never cited. (Garfield E. The history and meaning of the journal impact factor. JAMA 2006;295:908-93.)
How to calculate (1)

Go to the library site, electronic databases & click “W”
Step 2

Click open “Web of Science”
Step 3

Click “I agree”
Step 4
Step 6

1. Enter Surname Initial* (don’t forget the asterisk)

2. Enter a key word from your address. For me, “Sydney” works best

3. Click Search
Step 7

Now click “Create citation Report”

This is what then comes up. It shows your publications from latest to earliest.
This is what comes up now. It shows all your papers, from most cited, to least. It also shows a provisional h index. This may change … (keep reading)
HOWEVER….

• If you have a common name like I do (Chapman S*) it is likely that some of the citations that will appear will not be yours. You need to now remove these one by one.

• It turns out that there is another Chapman S* with “Sydney” in their address who is an astronomer. This is how I remove this person…
Scrolling down, I see here that papers 6 & 9 are not mine. I click their respective boxes and then
Important:

• You need to perform this “click off” step this one page at a time, rather than work through your list, checking all the “non you” papers and then hoping to see them all disappear in a single click of the “go” button. This is a little tedious…but you only need keep doing it until you see the “h index line” (see next page). For me, it meant deleting only 4 “non me” Chapman S*’s
Here, you can see that my 20th most cited publication has been cited 22 times. On the next page, my 21st most cited has been cited 20 times. My h index is therefore 20, because to get to 21, the 21st would need to have 21 citations. BUT WAIT .. THERE’S MORE
Suggestion

• Print out from the screens your publications that will be counted in your h, because you may need to manually add some extras … a print out will make this easier to see where you will add any of these.
Hidden citations!!

- If you have books or papers in non-Web of Science indexed journals (or in editions of indexed journals before these journals became indexed) which you suspect or know have been well cited, these can be manually added to your h index calculation.

- Also, many citations are entered by authors incorrectly: it is likely that more people have cited your papers than is apparent from a standard search as shown above.

- So how do you find citations for these “extras”?
Now click on a different section of Web of Science, the “Cited reference Search”
The “cited reference” search

This is what appears
Under “Cited author” again put your name (Chapman S*). Under “Cited work” put the Title of any books or reports. One of my early books was “Great Expectorations”
Here, my book has been cited 24 times – which is >my provisional H index of 20, so I’m in luck! My H index might move up one? But wait, there’s more ....
I have noticed that people sometimes refer to my book as “Great Expectations” not “Great Expectorations” . . so let’s see if any mis-cites have occurred
Someone actually mis-cited it .. But they all count: cites now increase to 25
Search for mis-cites to articles too

• The same applies to people incorrectly citing your research papers.. It happens often! To find these put your name, and the year of publication of the paper in the cited reference search boxes.

• The next slide shows what I get if I put Chapman S* and 1985
I get all articles by any Chapman S*s in 1985. I can now look through these and check which ones are mine, by looking for journal name and starting page etc…

Both mine .. and this one counts!
remember

• It is wise to also check each of your well-cited papers manually like this, in addition to the earlier “auto” search. Do not waste time double-checking low cited papers (unless your provisional h index is also low), but particularly check papers that within and just below your provisional h index score.
Finally…

- When you have done all the previous steps you will have your “provisional” list of publications showing your provisional h factor, and possibly some extra publications that you picked up by manual searching as just described.
- When I did this, I found 4 extra publications (two books; one paper I published when my address was not “Sydney”; and one paper that was published in a journal which initially was not indexed. These had respectively:84, 54, 27 & 25 citations, placing them above my provisional h index of 20.
• When I slotted them into the original 20 publications I had with citations of 20 or more, I erroneously anticipated that this would mean my h index might rise by 4 points .. NOT SO.
• What happened was that the new papers of course caused the base level number of citations to correspondingly rise.
• My final, adjusted h index is now 22, because my 23rd & 24th most cited papers have been cited only 22 times, and for my h index to rise to 23 would require that my 23rd most cited paper was cited 23 times.
• I published my first paper in 1976, so in 32 years my h index of 22 makes me .....a “successful” researcher.
The future

• I have 12 papers hovering between 16 and 22 citations, so anticipate upward movement in the near future!
What we’d like all staff to do

• We would like all academic staff to calculate their h indexes, following carefully the previous instructions.
• When you have done this, please send to Simon Chapman a file showing, from highest to lowest, the full titles of all papers in your “adjusted” h index, together with their citation counts (eg “36”) and the date you completed your calculation. Also please provide the year of your first peer reviewed publication and note any years when you were research inactive for personal or other reasons.
• Note that these will remain confidential and not disclosed to other staff without your permission
• We intend annually updating a distribution graph of the School’s staff’s h indexes, and hope this will be a useful way of demonstrating research excellence across the School as a whole. The graph will be de-identified, but all staff will of course know where they lie and whether their impact has improved over the years.