

# Track The Impact Of Your Research Publications

Presented by Jing Li Co-hosts: Wei Cai, Meijun Huang, Sarah Su

UTS CRICOS 00099F

### What do we cover today

- What is research impact?
- How to find traditional metrics using: Scopus, Web of Science, SciVal, Google Scholar
- How to find Altmetrics using: Altmetrics for Institutions, PlumX





# Research impact is far more beyond publications and metrics!



#### **Research Impact**

Australian Research Council defines "Research impact is the contribution that research makes to the economy, society, environment or culture, beyond the contribution to academic research."

**NHMRC** "defines the impact of research as the verifiable outcomes that research makes to **knowledge**, **health**, the **economy** and/or **society**, and not the prospective or anticipated effects of the research."

Research Impact Pathway								
Inputs	Activities	Outputs	Outcomes	Benefits				
<ul> <li>Research income</li> <li>Staff</li> <li>Background IP</li> <li>Infrastructure</li> <li>Collections</li> </ul>	<ul> <li>Research Work and Training</li> <li>Workshop/Confere nce Organising</li> <li>Facility Use</li> <li>Membership of Learned Societies and Academies</li> <li>Community and Stakeholder Engagement</li> </ul>	<ul> <li>Publications including E- Publications</li> <li>Additionsto National Collections</li> <li>New IP: Patents and Inventions</li> <li>Policy Briefings</li> <li>Media</li> </ul>	<ul> <li>Commercial Products, Licences and Revenue</li> <li>New Companies – Spin offs, Start Ups or Joint Ventures</li> <li>Job Creation</li> <li>Implementation of Programs and Policy</li> <li>Citations</li> </ul>	<ul> <li>Economic, Health, Social, Cultural,</li> <li>Environmental,</li> <li>National Security,</li> <li>Quality of Life,</li> <li>Public Policy or</li> <li>Services</li> <li>Higher Quality Workforce</li> <li>Job Creation</li> </ul>				
			<ul> <li>Integration into Policy</li> </ul>	<ul> <li>Risk Reduction in Decision Making</li> </ul>				

https://www.arc.gov.au/policies-strategies/strategy/research-impact-principles-framework

### Use metrics responsibly

#### **Advantages**

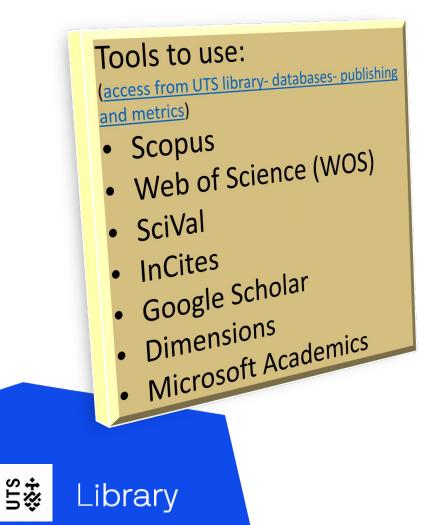
#### Limitations

- Publications are well documented and accessible
- Citations and mentions are based on numbers and quantitative
- <u>Definitions of selected metrics</u>

- Citations and mentions: positive + negative <u>https://scite.ai/\_</u>- find supporting and contradicting citations
- Self-citations
- Difference between disciplines
- Journal articles are easily tracked by metrics rather than other type of publications like books, arts, etc.



### **Use metrics to track Academic Impact**



#### Selected metrics/indicators to

#### Compare within same discipline area and time period

- Total number of publications
- Total number of citations
- Average citations per article
- <u>h-index</u> and h5-index

#### Compare cross different discipline areas and time periods

- Field-weighted citation impact (FWCI)
- Publications in top journal percentiles (by SNIP)
- Highly cited papers (WOS top 1% articles in the same field same year)

#### Other

- Publications in topic areas
- Researchers collaborated with you
- Researchers cited your publications

### Field Weighted Citation Impact (FWCI)

FWCI takes into account the differences in research behaviour across disciplines, it can be used to compare results between different disciplines.

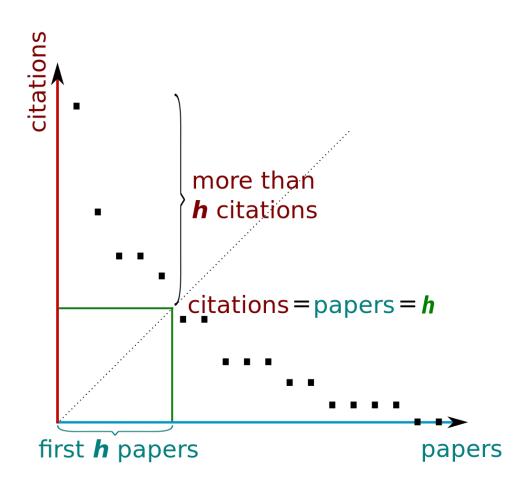


- Field Weighted Citation Impact (FWCI) is the ratio of the total citations received by the researcher's output, and the total citations that would be expected based on the average of the subject field, year & document type.
- An FWCI of 1 means that the output performs just as expected against the global average.
- More than 1 means that the output is more cited than expected according to the global average; for example, 1.48 means 48% more cited than average.

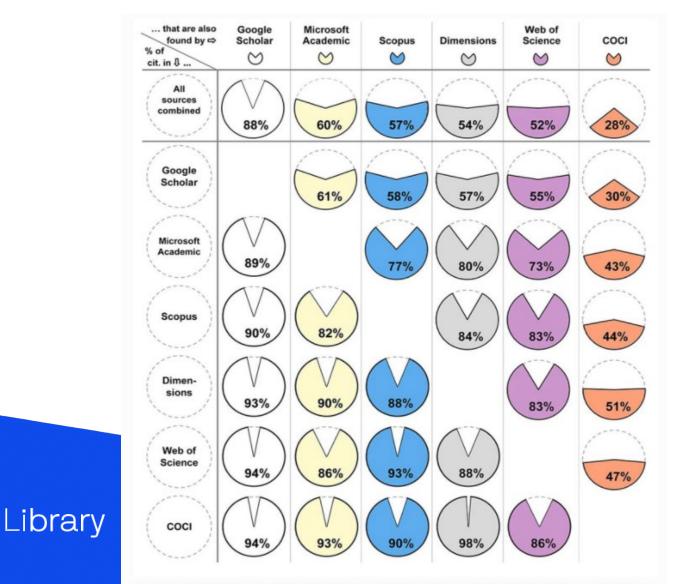
# h-index

- Definition: number (h) of articles that have received at least (h) citations over the whole period.
- h-index measures both quality and quantity of research publications
- h-index should NOT be used to compare researchers in difference disciplines





#### **Coverage of different citation tools**



Martín-Martín, A., Thelwall, M., Orduna-Malea, E., & Delgado López-Cózar, E. (2021). Google Scholar, Microsoft Academic, Scopus, Dimensions, Web of Science, and OpenCitations' COCI: a multidisciplinary comparison of coverage via citations. *Scientometrics*, *126*(1), <u>871-</u> 906. 10.1007/s11192-020-03690-4

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## Journal metrics used by Scopus: CiteScore, SJR and SNIP

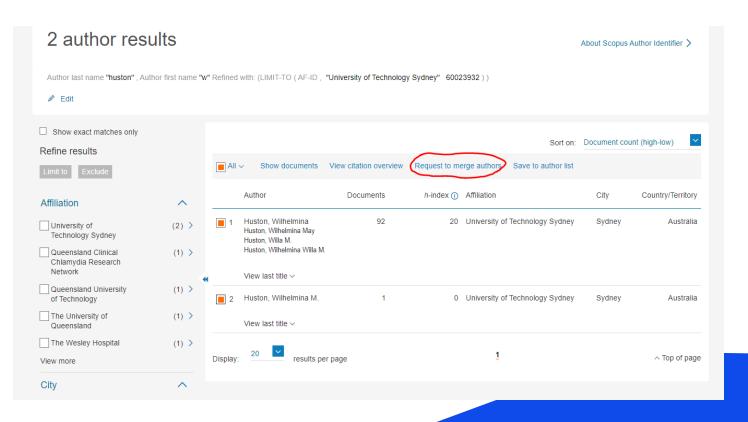
- CiteScore is the raw number of citations divided by publications of a journal in a 3 years window.
- SJR (Scimago Journal Rankings) considers the difference of citations received from different journals, it means citations from higher ranked journals gain more weight than citations from lower ranked journals, for example, a citation from Nature values much more than a citation from Lecture Notes in Computer Science.
- SNIP (Source Normalized Impact Per Paper) considers the citing pattern/potential of journals in different subject fields, for example, authors in maths study area normally cite less (use less references) than authors in medical study area. SNIP uses a formula to eliminate this difference and make journals from different subject areas comparable.



## Find your metrics in <u>Scopus</u>

#### It's important to check your author records before finding your metrics!

- 1. In Scopus Author Search, type in surname and initials
- 2. Refine search results by selecting affiliations
- 3. If your publications are split into multiple author records, check publication list of each record, tick all the records below to you and click "Request to merge authors"



# Find your metrics in **Scopus**

#### In Author profile page:

- Total number of publications
- Total number of citations
- h-index

#### Click "Analyze author output"

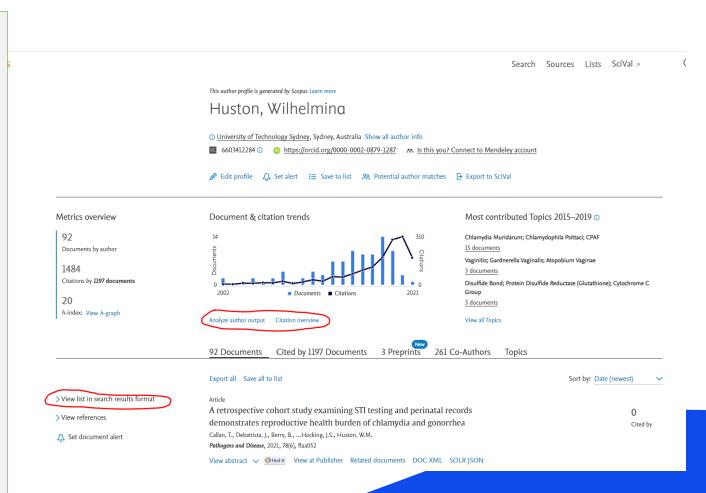
- Journals published in
- Co-authors

#### Click "Citation overview"

 Citation numbers with or without selfcitations

### Click "View list in search result format" for whole Publication list:

- Citations and FWCI of each paper
- Funding sponsors



### More metrics in <u>SciVal</u>- Overview module

Search by author's name in "Define a new researcher":

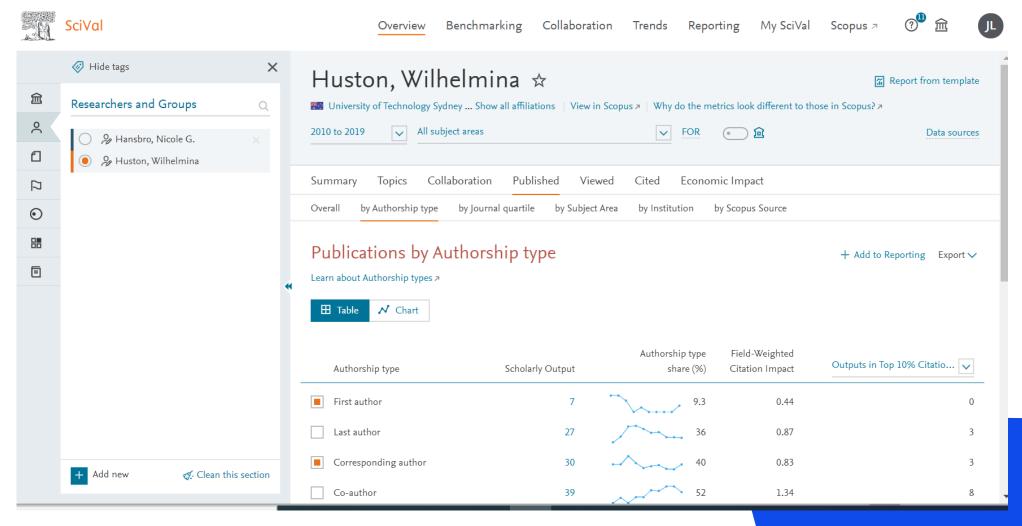
- FWCI of author
- h5-index
- Publication in top journal percentiles
- Publication and FWCI in topic areas
- Collaboration analysis
- Authorship analysis

Beware of year range when search in Overview module!

Contact us if you need faculty or school list in SciVal

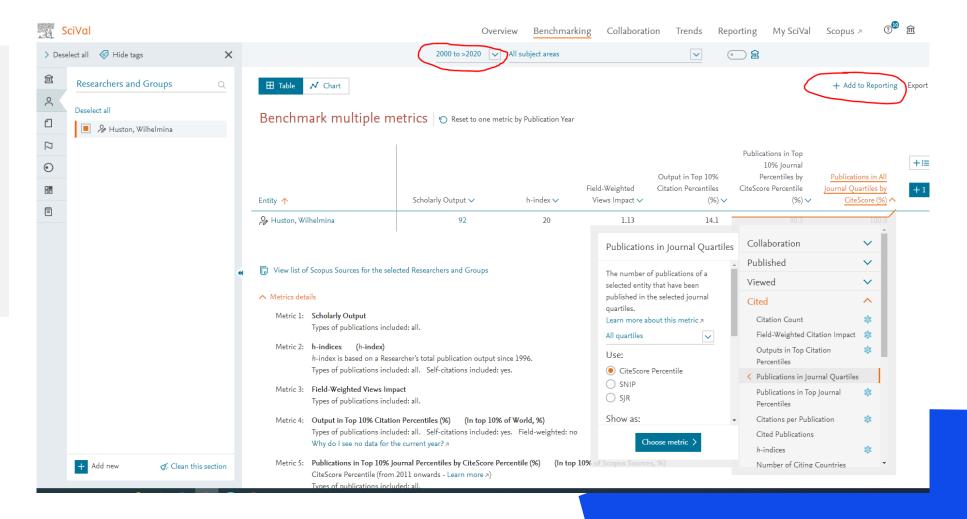
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			15.2 Citations per Publication ①	20 h-index ①	11 h5-index ①	

### Check authorship in <u>SciVal</u>- Overview module



#### More metrics in **SciVal**- Benchmarking module

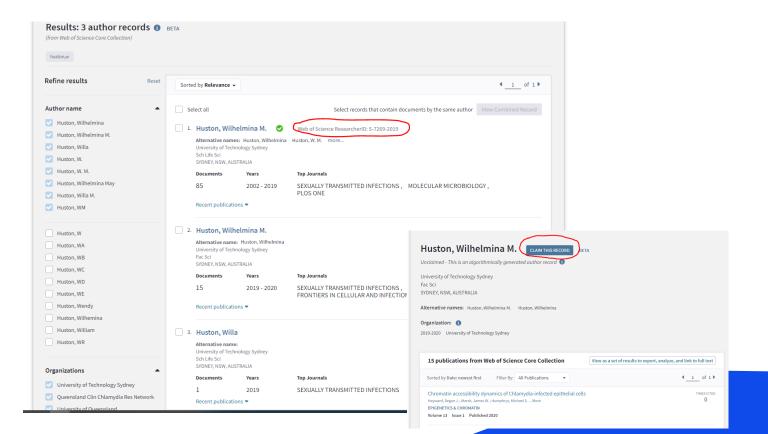
- Longer year range
- Click "Table" then to add multiple metrics into one table
- Compare between individuals or groups



# Find your metrics in <u>Web of Science</u>

#### It's important to check your author records before finding your metrics!

- 1. In WOS Author Search, type in surname and initials
- 2. Refine search results by selecting affiliations
- 3. If your publications are split into multiple author records, check publication list of the additional records, login WOS/Publons to claim these records



# Find your metrics in <u>Web of Science</u>

#### In Author profile page:

- Total number of publications
- Total number of citations
- h-index
- Author positions

Click "View as a set of results to export, analyze, and link to full text" Highly cited papers

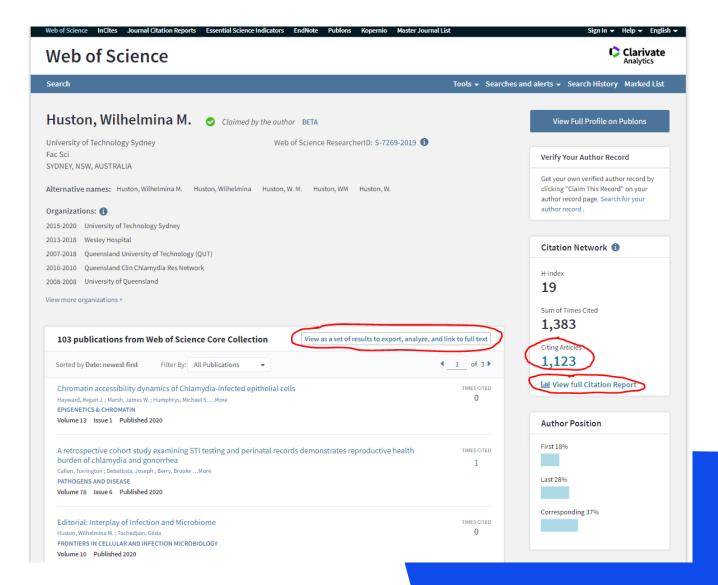
- Journals published in
- Co-authors

#### Click "View full citation report"

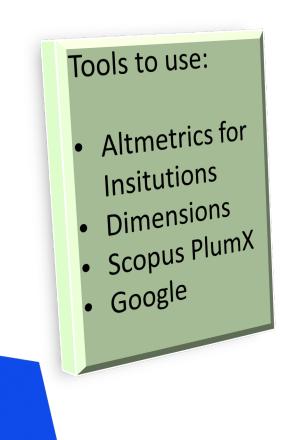
• Citation numbers with or without self-citations

#### Click the member of "Citing articles"

- Researchers who cited your article
- Metrics of each citing article



#### **Use metrics to track Societal Impact**



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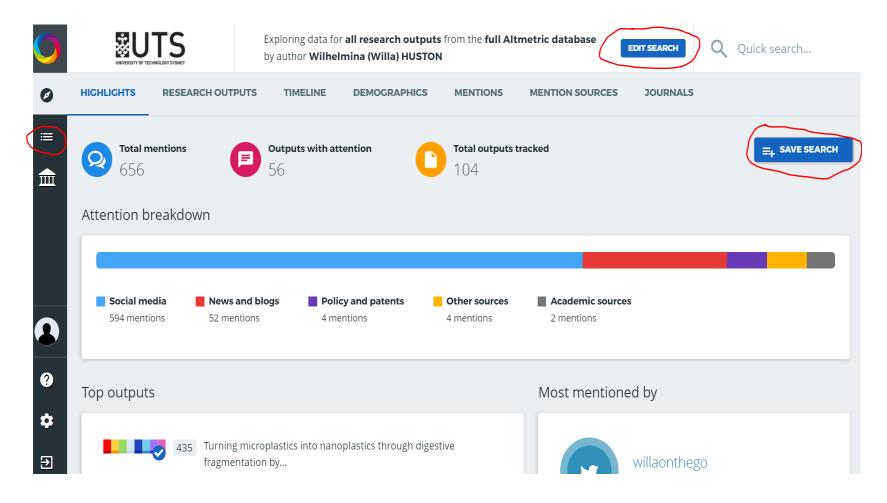
Library

#### **Metrics/Indicators:**

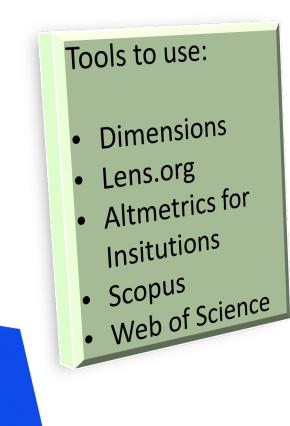
- References in public policies
- Mentions in news reports
- Mentions in social media
- Mentions in blogs
- References in Wikipedia
- More

#### Find media and policy mentions in <u>Altmetric for Institutions</u>

- Click "Edit Search" for more search filters
- Click "Save Search" then
   to create alerts and reports



#### **Use metrics to track Economic Impact**



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Library

#### **Metrics/Indicators**:

- Citations and mentions in Patents
- Government and industry funding

#### Find patent citations in <a href="https://www.lens.org">Lens.org</a>\*

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#### More research output types in **Dimensions**

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> REPOSITORY		Additional file 3. Annotation and fold-change regulation	5 I	Annotation of all th	ne significant peaks, w	ith tabs separating genomic features	ļ			

If you would like to publish datasets, please contact <u>data-librarian@uts.edu.au</u>

# Tips to improve your research impact based on metrics

- Supply ORCID ID when you publish
- Maintain your author profiles regularly
- Try to publish in Open Access or provide copyright cleared versions of your publications to OA repositories
- Contribute to online forums or discussions with summaries for those who are not specialists
- Develop and make available summaries of your research and data including infographics, images, and files
- Provide author opinion and editorial content for mainstream press
- Always include DOIs when you discuss your publications in digital platforms



## Write Research Output Performance Evidence (ROPE) for grant applications

- Tips of writing ROPE on <u>library website</u>
- Reference examples of successful grant applications
- Guideline of exporting publication list from ORCID to ARC RMS



### Support

- <u>Planning and Quality Unit</u>: university metrics and rankings
- <u>Research Office</u>: UTS research output management systems, funding applications, IP and commercialization
- <u>Library</u>: workshops and consultations for individual research and group benchmarking metrics



### **Additional Resources**

- University of Queensland: <u>Research impact evidence</u>
- University of Melbourne: <u>Research Impact for Fine Arts and Music</u>



Thank you! Questions?

