REPORT | The Annual G20 Scorecard - Research Performance 2021

The G20 economies are a leading force in the global research system. Together, they represent more than 80% of Gross Domestic Product (GDP) and two-thirds of the global population. This annual report from the Institute for Scientific Information (ISI)™, released ahead of the G20 Summit, gives a visual comparative snapshot for each of the 19 member nations of the G20 (the EU is the 20th member), covering a wide range of research performance metrics.

Special analysis in this year's report focuses on the relationship between G20 nations' research responses to COVID-19 and the research subject diversity of their portfolios. It finds that regions with more even research bases tend to support a response across a wider range of COVID-19 topics, while those with less even research bases tend toward a more specialized response.

isi | Institute for Scientific Information

The Annual G20
Scorecard – Research
Performance 2021

Jonathan Adams and Gordon Rogers

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https://clarivate.com/lp/the-annual-g20-scorecard-research-performance-2021/

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Future of Research Forum 2021 (October 19 – 21)

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Video On Demand
- Ziua 1 >
- Ziua 2 >
- Ziua 3 >
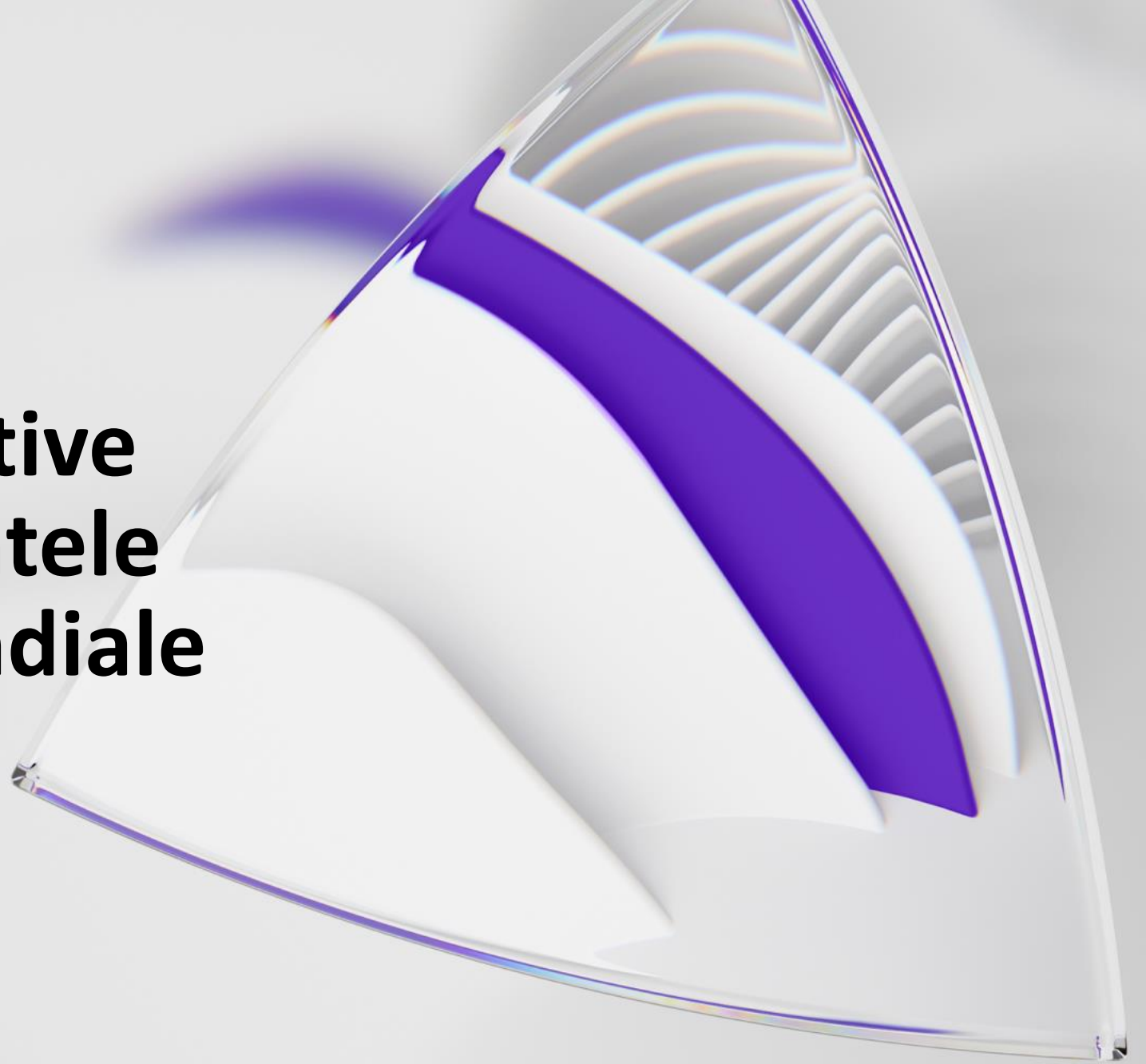
Noțiuni introductive privind clasamentele universitare mondiale

Adriana FILIP - Solutions Consultant
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Octombrie 2021

REPORT | An introduction to global university rankings

- Globalization of science is becoming increasingly prominent, and the number of nodes and ties in the network has substantially increased over time. The traditional science powerhouses have occupied central positions in the network, while the new emergent scientific countries are rising, both driving the evolution of world order.

- Ranking systems have become a standard feature in higher education systems and are increasingly accepted as an instrument to inform and guide evaluation and planning decisions at a global, national, institutional and individual level.

In this report, we discuss the rise in significance of global university rankings, the history of these rankings, and provide some context to better understand some of the major ranking systems.

https://clarivate.com/lp/an-introduction-to-global-university-rankings/
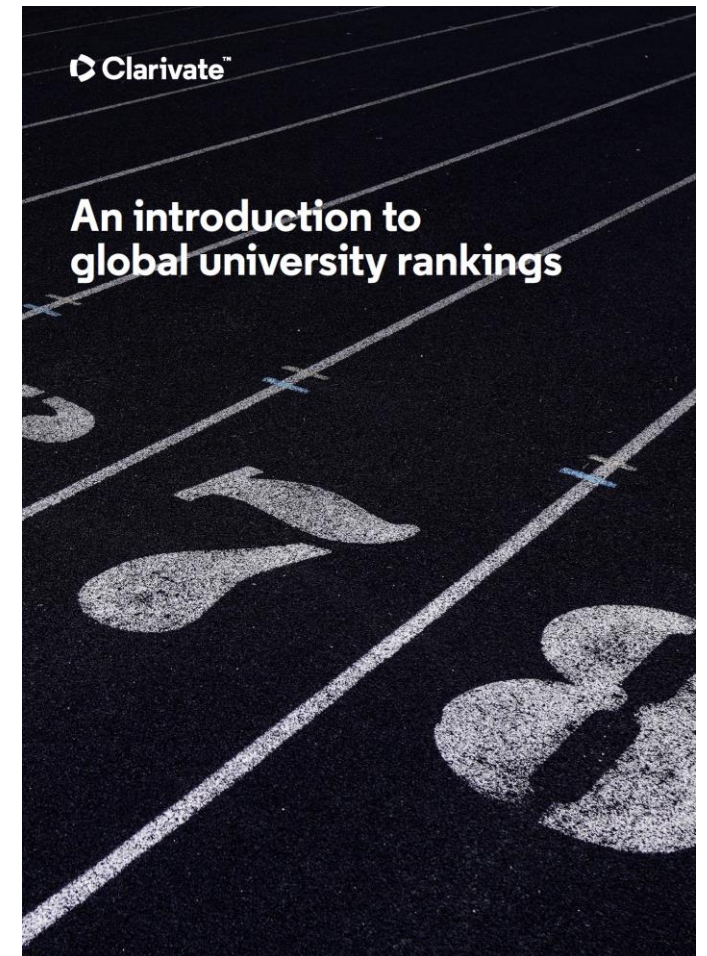
Influence of ranking systems on the universities ecosystem

STUDENTS	Reputation derived from league tables/rankings is a critical determinant for student applicants, especially for international students
GOVERNMENT & FUNDING AGENCIES	Government and funding agencies are more favorably disposed to highly ranked universities
EMPLOYERS	Employers often seek out and prioritize candidates from the most highly respected universities
COLLABORATIONS	Organizations and institutions use rankings as a benchmark when seeking out collaboration partners
UNIVERSITIES & LEADERSHIP	University leadership can see the impact directly in the form of quality and number of students enrolled, which in turn affect their budget

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The major players

ACADEMIC RANKING OF WORLD UNIVERSITIES	THE WORLD UNIVERSITY RANKING	U.S. NEWS GLOBAL UNIVERSITY RANKING	QS WORLD UNIVERSITY RANKING
Publisher: Shanghai-Ranking Consultancy	**Publisher:** Times Higher Education	**Publisher:** U.S. NEWS & WORLD	**Publisher:** QS Quacquarelli Symonds
Since: 2003	**Since:** 2004	**Since:** 1983/2013*	**Since:** 2004

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Understanding the rankings

■ Research related indicators	■ Patent related indicators	■ Other indicators	
Number of publications in indexed journals	Staff-to-student ratio	Citations per faculty	Number of published books
Industry article citation impact	Number of conference proceedings	Avg. number of times a journal has been cited by patents	University income
Doctorate to Bachelor students ratio	Number of Highly Cited Researchers™	Number of publications cited in Science / Nature	Number / percentage of publications with international co-authors
Number / ratio of 1% most cited publications	Number of basic patents filed by the organization	Proportion of international students	Number of citations
Percentage of articles that contain one or more industrial co-authors	Citations per faculty	Number / percentage of 10% most cited publications	Student reputation among companies
Percentage of patents cited	Proportion of international staff	Reputation among colleagues / students	Average number of citations
Reputation among research peers (regional / international)	Quantity and quality of research grants	Research income from industry	Percentage of academic staff possessing a doctorate degree
Staff / alumni with Nobel prizes or the Fields medal	Ratio of patent applications to grants over the assessed timeframe	Percentage of patents sought with the U.S., European and Japanese patent offices	Total number of times a patent has been cited by other patents

University rankings are based on a range of different factors, and different ranking systems use different indicators and different weights.
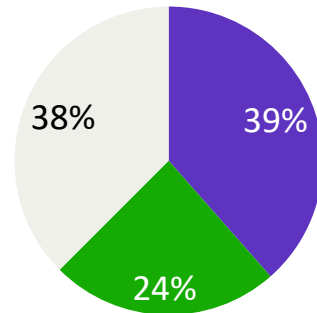
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Boosting research can help improve ranking

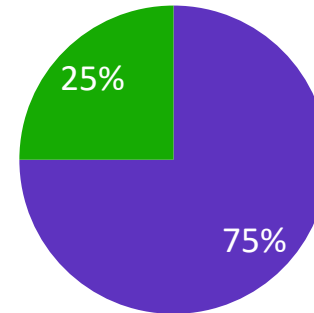Weight of bibliometric research indicators (Non-Exhaustive & Exemplary)

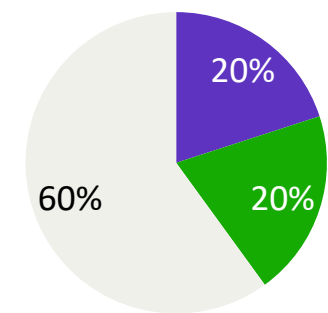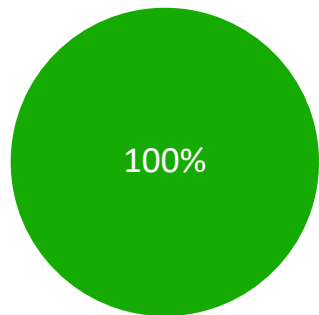**Academic Ranking of World Universities**
- 10%
- 30%
- 60%
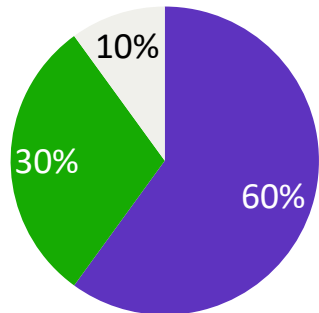
THE World University Ranking
- 38%
- 39%
- 24%

U.S. News Global University Ranking
- 25%
- 75%

QS World University Ranking
- 20%
- 20%
- 60%

Legend:
- Bibliometric research indicators
- Other research indicators
- Other indicators

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The shown ranking systems are chosen randomly for exemplary reasons. Not showing other ranking systems should not be interpreted as any preference for certain ranking systems

8

Reputation in the ranking systems

Weight of reputation indicators (Non-Exhaustive & Exemplary[1])

Academic Ranking of World Universities
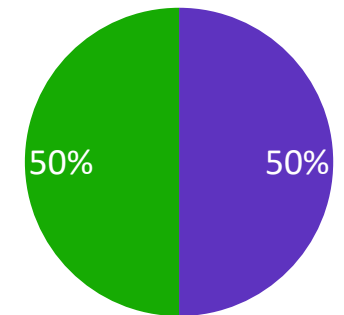
100%

THE World University Ranking

33%

67%

U.S. News Global University Ranking

25%

75%

QS World University Ranking

50%   50%
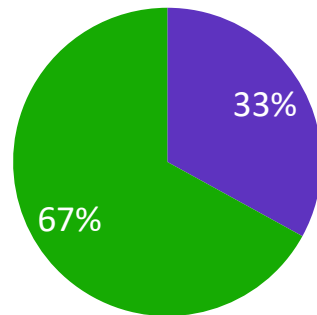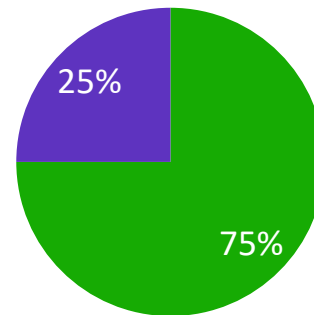
■ Reputation

■ Other

A strategy framework to help you boost ranking

1	**Assessment**		Assess your university performance with measurable ranking indicators (research bibliometric indicators, teaching indicators, etc.)
2	**Benchmarking**		Benchmark against peers
3	**Setting Goals**		Setting achievable goals in a certain timeframe
4	**Goals Alignment**		Align goals with university context and global strategy
5	**Setting Targets**		Set targets to reach the goals
6	**Defining Initiatives**		Identify initiatives to reach targets
7	**KPIs**		Define KPIs on goal, target and initiative levels
8	**Plan**		Derive an implementation plan
9	**Governance**		Define a project governance structure

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A strategy framework to help you boost ranking

INDICATORS

What do scientific indicators mean?
Understand the "true" meaning of scientific indicators in different ranking systems

IMPACT

What is their impact?
Understand the impact of scientific indicators in different ranking systems and determine indicators having the highest impact in one or more ranking system

RELEVANCY

Which indicators should my university boost?
Determine indicators most relevant to your university in alignment with the global institute strategy and circumstances

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A strategy framework to help you boost ranking

ASSESS	**Where am I currently standing?** Determine what is our current position in the chosen indicators using corresponding assessment tools and benchmark with other universities
SET GOALS	**What are my goals?** For each chosen indicator determine a goal to reach in a certain period of time
ESTABLISH INITIATIVES	**Which initiatives will get me there?** Establish a set of initiatives, measures and projects for each goal
PLAN	**How will I get there?** Derive an implementation plan and governance. Follow your determined performance indictors closely and adjust plan, initiatives or goals with changing circumstances

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Ensuring that your data is considered correctly by ranking systems

SINGLE POINT OF CONTACT	Assign a single point of contact that communicates with the ranking systems that gather the requirements, deadlines and submission of data
DATA GOVERNANCE	Assign a committee that gathers the required data and ensures a timely submission
BUILD BUY IN	Build and maintain buy in across the university will ensure that data collection is smooth and there's no miscommunication about what the rankings mean and why you're doing it
DATA CONSISTENCY	Ensure affiliation consistency when publishing documents (one name of the university)
GOVERNMENTAL DATA CORRECTNESS	Ensure data is up to date and correctly submitted to governmental bodies.

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Use case: ShanghaiRanking

University Rankings using Clarivate data

- Our data is editorially selective, publisher neutral, and has been consistently structured since 1950.

- Complete cover-to-cover indexing and citation connections give you certainty that you are making the best decisions wherever you are in the workflow.

Address information

Affiliation

Some rankings use the *Corresponding Address* while others use our *Organization Enhanced (Affiliation)* profiles.

Academic Ranking of World Universities (ARWU)

- Starting 2003, ARWU has been presenting the world top universities annually based on a set of objective indicators and third-party data.

- More than 2000 universities are ranked by ARWU every year and the **best 1000 universities** are published.

2021 Academic Ranking of World Universities — 2021

The Academic Ranking of World Universities (ARWU) was first published in June 2003 by the Center for World-Class Universities (CWCU), Graduate School of Education (formerly the Institute of Higher Education) of Shanghai Jiao Tong University, China, and updated on an

Read More ⌄

Academic Ranking of World Universities   1 Institution   Search a university

World Rank	Institution	Romania	National/Regional Rank	Total Score	Alumni
801-900	Babeș-Bolyai University	🇷🇴	1	0.0	

Academic Ranking of World Universities (ARWU) | Methodology

Universities are ranked by several indicators of academic or research performance, including alumni and staff winning Nobel Prizes and Fields Medals, highly cited researchers, papers published in Nature and Science, papers indexed in major citation indices, and the per capita academic performance of an institution.

Full methodology >

Indicators and Weights for ARWU			
Criteria	**Indicator**	**Code**	**Weight**
Quality of Education	Alumni of an institution winning Nobel Prizes and Fields Medals	Alumni	10%
Quality of Faculty	Staff of an institution winning Nobel Prizes and Fields Medals	Award	20%
	Highly Cited Researchers	HiCi	20%
Research Output	Papers published in Nature and Science*	N&S	20%
	Papers indexed in Science Citation Index-Expanded and Social Science Citation Index	PUB	20%
Per Capita Performance	Per capita academic performance of an institution	PCP	10%

Indicator	Data Source
Nobel Prize	http://www.nobelprize.org/
Fields Medals	http://www.mathunion.org/
HiCi	https://clarivate.com/hcr/
N&S	http://www.webofscience.com/
PUB	http://www.webofscience.com/
Others	Number of academic staff data is obtained from national agencies such as National Ministry of Education, National Bureau of Statistics, National Association of Universities and Colleges, National Rector's Conference.

Academic Ranking of World Universities (ARWU) | PUB

742 results from Web of Science Core Collection for:

Q oo=univ bucharest

Analyze Results   **Citation Report**   🔔 **Create Alert**

Refined By: (Document Types: Articles ✕)   (Publication Years: 2020 ✕)

(Web of Science Index: Science Citation Index Expanded (SCI-EXPANDED) or Social Sciences Citation Index (SSCI) ✕)   Clear all

⇔ Copy query link

PUB | Total number of papers indexed in Science Citation Index-Expanded and Social Science Citation Index in 2020. Only publications of 'Article' type are considered. When calculating the total number of papers of an institution, a special weight of two was introduced for papers indexed in Social Science Citation Index.

Academic Ranking of World Universities (ARWU) | PUB

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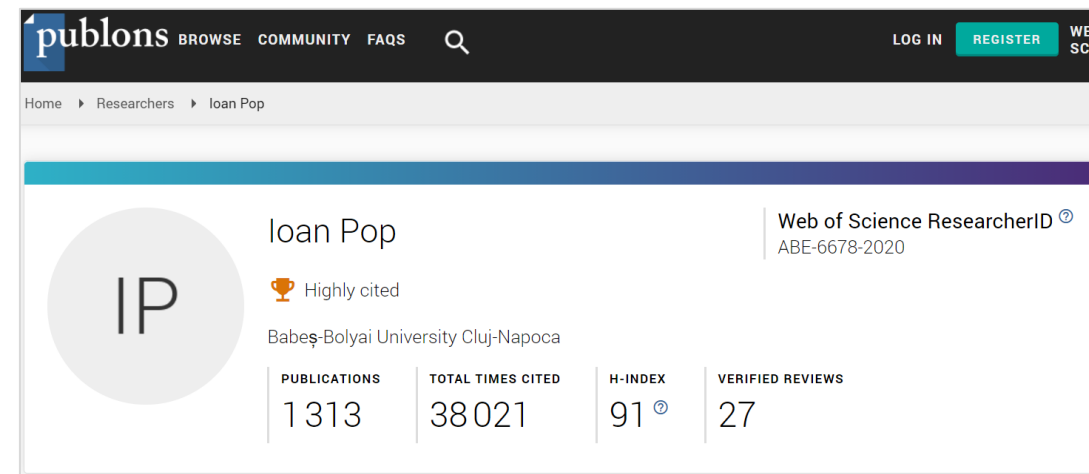
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ADDRESS

- Each Web of Science record has a *Corresponding Address*.

- When several authors collaborate on a publication, *all addresses are captured* and recorded in the *Addresses* field.

- The address segments are delimited by commas.
- Depending on the methodology, the order of appearance of organizations can have an impact on the results of rankings that use raw data. Therefore, it is important to establish a common signature policy and to monitor it to ensure that it is used properly.

Academic Ranking of World Universities (ARWU) | N&S

3 results from Web of Science Core Collection for:

🔍 oo=univ bucharest

Analyze Results **Citation Report** 🔔 Create Alert

Refined By: (Document Types: Articles ✕) (Publication Titles: NATURE or SCIENCE ✕) (Publication Years: 2016 or 2017 or 2018 or 2019 or 2020 ✕)

Clear all
🔗 Copy query link

N&S | The number of papers published in Nature and Science between 2016 and 2020.

To distinguish the order of author affiliation, a weight of 100% is assigned for *corresponding author affiliation*, 50% for first author affiliation (second author affiliation if the first author affiliation is the same as corresponding author affiliation), 25% for the next author affiliation, and 10% for other author affiliations.

Only publications of 'Article' type are considered.

Academic Ranking of World Universities (ARWU) | N&S

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100%

Addresses:

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▼ [2] Univ Libre Bruxelles, Neurophysiol Lab, B-1070 Brussels, Belgium

50%

▼ [3] Univ Poitiers, CNRS, Inst Physiol & Biol Cellulaires, F-86022 Poitiers, France

25%

To distinguish the order of author affiliation, a weight of 100% is assigned for *corresponding author affiliation*, 50% for first author affiliation (second author affiliation if the first author affiliation is the same as corresponding author affiliation), 25% for the next author affiliation, and 10% for other author affiliations.

Academic Ranking of World Universities (ARWU) | HiCi

Best practice > make sure your researchers have and maintain a Publons profile.

https://recognition.webofscience.com/awards/highly-cited/2020/

Academic Ranking of World Universities (ARWU) | HiCi

58 results from Web of Science Core Collection for:

🔍 oo=univ bucharest

Analyze Results   **Citation Report**   🔔 Create Alert

Refined By: (Highly Cited Papers ✕)   Clear all

🔗 Copy query link

HiCi | The number of Highly Cited Researchers selected by Clarivate Analytics. The Highly Cited Researchers list issued in November 2020 was used for the calculation of HiCi indicator in ARWU 2021.
Only the primary affiliations of Highly Cited Researchers are considered.

Use Web of Science and InCites to monitor the number of Highly Cited papers your institution is producing.

Global Ranking of Academic Subjects (GRAS)

In ShanghaiRanking's Global Ranking of Academic Subjects 2021, institutions are ranked in 54 subjects across Natural Sciences, Engineering, Life Sciences, Medical Sciences, and Social Sciences.

The Global Ranking of Academic Subjects has scrutinised the universities that have published a certain number of publications during the period of 2015-2019. The publication threshold is set differently for different subjects. Bibliometric data are collected from Web of Science and InCites.

Full methodology >

Indicators	Sources
Q1	InCites database https://incites.clarivate.com/#/analytics
CNCI	InCites database https://incites.clarivate.com/#/analytics
IC	InCites database https://incites.clarivate.com/#/analytics
Top	InCites database https://incites.clarivate.com/#/analytics
Award	See list on ARWU website

Global Ranking of Academic Subjects (GRAS)
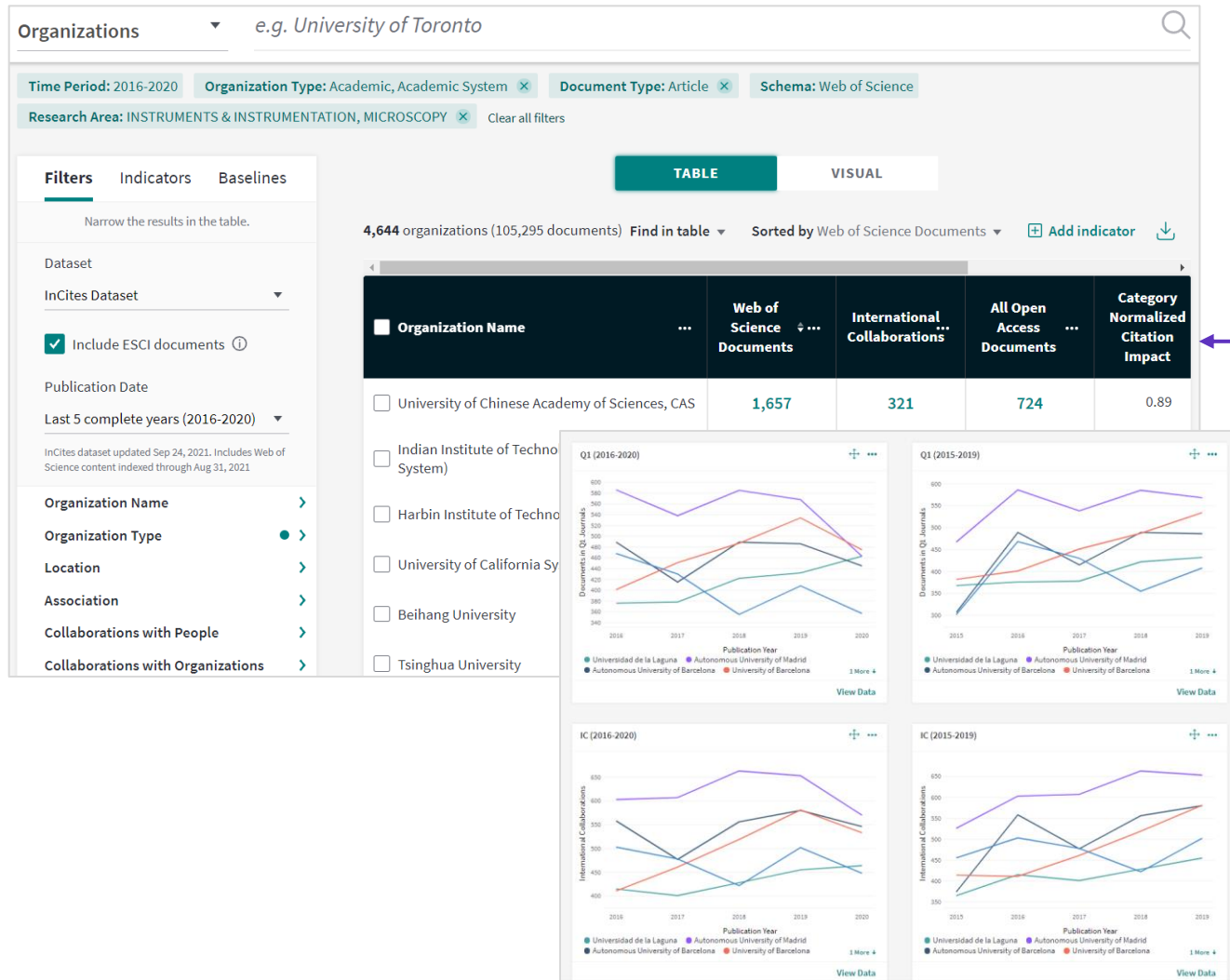
- ✓ Adjust the study period to match the GRAS edition
- ✓ Reproduce the classification of GRAS based on the Web of Science categories
- ✓ Use the same filters and identical selection criteria.

Dashboards can be used to display the rankings metrics, understand, anticipate.

Vă mulțumesc!

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Additional resources

Web of Science Learning >
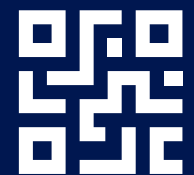
Web of Science Academy >

Events & Webinars >

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Videos >

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