

SPANISH MATHEMATICS ACCORDING TO INTERNATIONAL STUDIES (2024): STANFORD LIST AND SHANGHAI RANKING

Each year, rankings promoted by Stanford University and Shanghai University (ARWU) are published, which respectively identify the most scientifically influential researchers and the most prestigious universities. These rankings also break down results by scientific fields and research centers. Over time, these lists have gained more prestige and attention than others due to their pursuit of objective and internationally comparable parameters, as well as their robustness in evaluating major research centers.

At the Institute of Mathematics of the University of Granada (IMAG), we have conducted an analysis of both rankings, focusing specifically on the field of Mathematics and Spanish universities for the year 2025. Below we provide the results of each ranking, preceded by a brief description of the methodology used, and highlight the outcomes achieved by our University and Institute.

1. Top 2% of the world's best scientists according to Stanford University

The Stanford U. study lists the 2% of scientists whose work has been most influential worldwide. This study is published annually in the journal Plos Biology. Specifically, the procedure is introduced in the articles:

Ioannidis JPA, Baas J, Klavans R, Boyack KW (2019) A standardized citation metrics author database annotated for scientific field. PLoS Biol 17(8): e3000384.

<https://doi.org/10.1371/journal.pbio.3000384>

Ioannidis JPA, Boyack KW, Baas J (2020) Updated science-wide author databases of standardized citation indicators. PLoS Biol 18(10): e3000918.

<https://doi.org/10.1371/journal.pbio.3000918>

The current year's data, used in the present study, are collected from:

August 2024 data-update for "Updated science-wide author databases of standardized citation indicators" Publ.: 16 Sept. 2024 | V. 7 | DOI: 10.17632/btchxktzyw.7 Contributor: Ioannidis JPA <https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/7>

Methodologically, our comparison is limited to the results of the area "Mathematics & Statistics", according to the typology entered in the reference files. These provide data broken down into two lists, "career" and "singleyr", which refer, respectively, to the researcher's career (up to 2023) and the last year (2023). We show a table with a column for each of these lists, and a third one counting the total number of researchers appearing in at least one of the two first columns (in the case a researcher appears in both lists, he/she is counted only once).

Research center	Number of researchers		
	Career	Singleyr	Total
U. Granada	6	6	8
U. Polit. Cataluña	6	5	6
U. Sevilla	4	2	4
U.A. Barcelona	3	3	4
U. Complutense Madrid	3	2	4
U. Zaragoza	3	2	3
U. Polit. Valencia	3	2	3
U. Santiago Compostela	3	1	3
CIMNE	2	1	2
U. Valencia	2	1	2
U. Barcelona	1	2	2
BCAM País Vasco	1	1	2
Consejo Superior de Inv. Científicas (CSIC)	1	1	1
U.A. Madrid	1	1	1
U. Carlos III Madrid	1	1	1
U. Cantabria	1	1	1
U. Málaga	1	1	1
U. Murcia	1	1	1
U. Oviedo	1	1	1
U. País Vasco	1	1	1
U. Lleida	1	1	1
U. La Rioja	1		1
U. Polit. Madrid	1	-	1
U. Vigo	1	-	1
ICMAT	-	1	1
U. La Laguna	-	1	1
U. Salamanca	-	1	1
U. Polit. Cartagena	-	1	1
TOTAL	49	41	59

The UGR researchers who appear in at least one of these columns are [D. Ruiz](#), [M. Sánchez](#), [A. Romero](#), [R. López](#), [W.H. Meeks](#), [P.J. Torres](#) (all members or regular collaborators of IMAG), [Rafael Ortega](#) and [Nicola Bellomo](#).

2. Shanghai Index in Spanish Mathematics

The positions of Spanish universities in the Shanghai ranking (ARWU) for Mathematics in 2024 and in the four previous years are shown below. The list is ordered according to the values in 2024, although in all cases it includes both the national position of each Spanish center and the world position (in parentheses). The data are taken from

SPANISH UNIVERSITIES IN THE SHANGHAI MATHEMATICS RANKING						
		2024	2023	2022	2021	2020
1	U Granada	1 (51-75)	1 (76-100)	1-2 (76-100)	1-2 (76-100)	1-3 (76-100)
2	UA Barcelona	2-4 (76-100)	2-4 (101-150)	3-5 (101-150)	6-10 (201-300)	7-10 (201-300)
3	UC Madrid	2-4 (76-100)	2-4 (101-150)	3-5 (101-150)	3-4 (101-150)	4 (101-150)
4	U Barcelona	2-4 (76-100)	9-11 (201-300)	16 (401-500)	13-16 (401-500)	11-14 (301-400)
5	UA Madrid	5-6 (100-150)	2-4 (101-150)	3-5 (101-150)	3-4 (101-150)	1-3 (76-100)
6	U Carlos III	5-6 (100-150)	5-8 (151-200)	6-9 (151-200)	5 (151-200)	5-6 (151-200)
7	UP Valencia	7 (151-200)	5-8 (151-200)	6-9 (151-200)	6-10 (201-300)	7-10 (201-300)
8	UP Cataluña	8-11 (201-300)	9-11 (201-300)	1-2 (76-100)	1-2 (76-100)	1-3 (76-100)
9	U Salamanca	8-11 (201-300)	12-16 (301-400)	----	13-16 (401-500)	11-14 (301-400)
10	U Sevilla	8-11 (201-300)	5-8 (151-200)	6-9 (151-200)	6-10 (201-300)	5-6 (151-200)
11	U País Vasco	8-11 (201-300)	5-8 (151-200)	6-9 (151-200)	6-10 (201-300)	7-10 (201-300)
12	UP Cartagena	12-13 (301-400)	9-11 (201-300)	12-15 (301-400)	----	----
13	U Cantabria	12-13 (301-400)	12-16 (301-400)	----	----	----
14	U Oviedo	14 (401-500)	----	----	----	----
15	U Santiago C	----	12-16 (301-400)	12-15 (301-400)	13-16 (401-500)	11-14 (301-400)
16	U Valencia	----	12-16 (301-400)	12-15 (301-400)	13-16 (401-500)	----
17	U Zaragoza	----	12-16 (301-400)	12-15 (301-400)	11-12 (301-400)	11-14 (301-400)

18	UP Madrid	----	17-18 (401-500)	10-11 (201-300)	6-10 (201-300)	7-10 (201-300)
19	U Cádiz	----	17-18 (401-500)	10-11 (201-300)	11-12 (301-400)	15 (401-500)