Editorial

Some data regarding scientific research from Universidad Distrital Francisco José de Caldas in the SCOPUS database in 2023

This number of the **Ingeniería** journal explores the participation of the researchers from Bogotá City in Colombia that selects our journal to present their contributions in different research areas of Engineering, which includes Industrial, Electrical, Electronic, Civil, Environmental, Agricultural, and Mechanical Engineering, among others. The main idea of this number is to present the significant contribution of advancing scientific knowledge in Engineering, Science, and Technology from multiple universities in Bogotá city that selects the *Ingeniería* journal as a window to promote research made in Bogotá around the world.

The **Ingeniería** journal is part of the **Facultad de Ingeniería** at Universidad Distrital Francisco José de Caldas (UDFJC), which is a public university located in Bogotá city. As one of its foundational purposes, this university dedicates multiple human and economic resources to promote scientific research in Bogotá, Colombia, with free access worldwide. To demonstrate the importance of the UDFJC in the Colombian research context and its considerable efforts to promote science and technology, this editorial note is presented some important data regarding scientific investigation, taking the SCOPUS database as the source.

Exploring the SCOPUS database allows observing some of the leading indicators of the UDFJC in terms of high-impact research with international visibility (this data were compiled until 02/27/2023) [1]. In the last 20 years (from 2004 to 2023), the UDFJC has published about 2982 documents, which corresponds to the 99.5327% of the research history of the university in this database (i.e., 2996 documents). Figure 1 presents the evolution of the research published during the last two decades in the UDFJC. The behavior of the publications rate in Figure 1 shows that:

i. From 2012 to the present, the researchers with institutional affiliation from UDFJC have published more than 100 papers yearly, reaching a peak in 2021 with more than 400 documents.

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ii. The tendency for 2023 shows that in the first two months of the year published 46 documents in the SCOPUS database, which implies that it is expected at the end of the year that the UDFJC will report more than 276 papers published.

iii. The annual increment of the publications in the SCOPUS database shows that the researchers from UDFJC have understood the importance of publishing their research and discoveries in international databases where these can attract potential readers and citations worldwide, contributing to the discussion on science and technology from Bogota to the world.

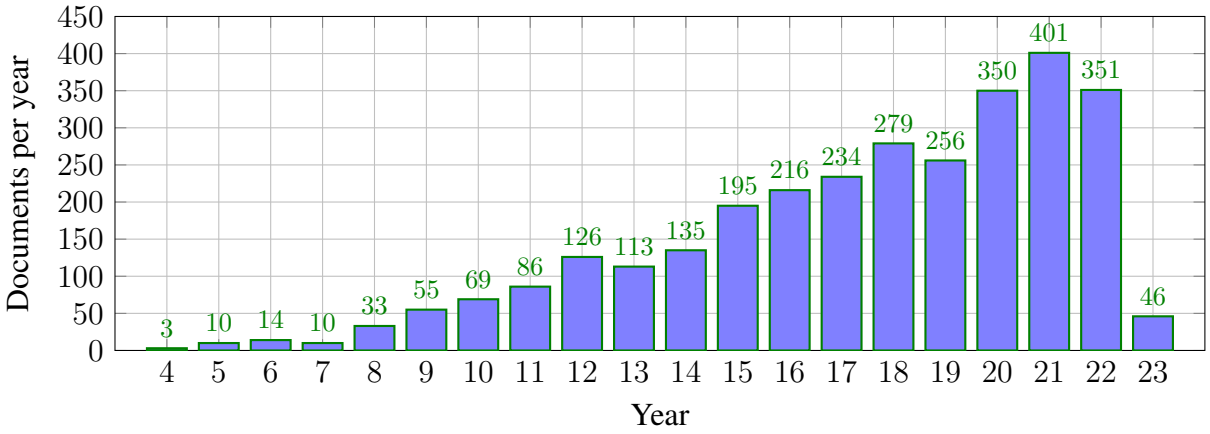

Figure 1: Number of documents published in the SCOPUS database from 2004 to 2023

Regarding the areas of knowledge where authors of the UDFJC produce more scientific research, Figure 2 are presented the list of the main sciences where the UDFJC has publications.

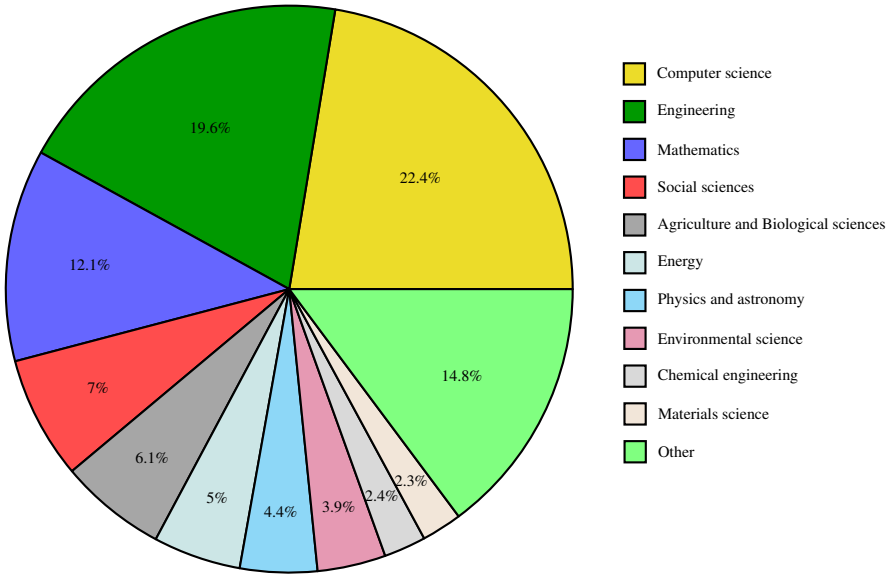

Figure 2: Percentaje of documents published per area of knowledge

From Figure 2 it is clear that Computers sciences (22.40%), engineering (19.60%), and mathematics (12.10%) are the most recurrent areas of publication by authors of the UDFJC, which

accumulates about 54.10% of the total documents published. Nevertheless, it is essential to note that social sciences is an increasing area of research and are in the fifth position with about 7.00% of publications, which implies that human sciences present a significant contribution regarding the global impact of the research from UDFJC for Bogotá, Colombia, and the world.

Finally, Table II is observed the group of 20 institutions where the UDFJC has strong relations regarding scientific research.

Table II: Universities and institutions with strong research relationship with authors from UDFJC

Affiliation name	**Documents**	**Location**
Universidad Nacional de Colombia	394	Colombia (Bogotá)
Universidad Tecnológica de Bolívar	167	Colombia
Pontificia Universidad Javeriana	93	Colombia (Bogotá)
Universidad de Los Andes, Colombia	82	Colombia (Bogotá)
Institución Universitaria Pascual Bravo	70	Colombia
Universidad Tecnológica de Pereira	55	Colombia
Universidad de Oviedo	51	Spain
Field Museum of Natural History	51	United States
Universidad Militar Nueva Granada	51	Colombia (Bogotá)
Universidad de Córdoba, Monteria	51	Colombia
Universidad del Rosario	47	Colombia (Bogotá)
Universitat Politècnica de València	46	Spain
International University of La Rioja	42	Spain
Instituto Tecnológico Metropolitano	37	Colombia
Universidad de Jaén	36	Spain
Freie Universität Berlin	34	Germany
Corporación Universitaria Minuto de Dios	34	Colombia
Universidad Nacional de Colombia Manizales	31	Colombia
Universidad Pontificia de Salamanca	29	Spain
Universidad de La Sabana	29	Colombia (Bogotá)

The main results regarding collaborative research from Table II are the following:

i. The UDFJC promotes collaborative research with multiple institutions located in Colombia, and particularly in Bogotá city, which confirms its role as an integrator of scientific knowledge in the city.

ii. One of the most important partners for UDFJC research is universities in the Iberian Peninsula (Spain), with five universities in its first 20 collaborative partners. These collaborations reached about 204 documents from 2996, i.e., 6.8091%.

iii. Between Universidad Nacional de Colombia (Bogotá) and Universidad Tecnológica de Bolívar (Cartagena, Colombia) sums 561 documents published in the SCOPUS database, i.e., the 18.725% of the total documents, which demonstrates the important role that plays researchers in both universities in conjunction with researchers at UDFJC for generating scientific advances in Engineering, Science, and Technology from Colombia to the world.

iv. The first 20 institutions that collaborate in research with UDFJC in Table 2 sums about 1430 documents published in the SCOPUS database, i.e. about 47.7303% of the total scientific production of the UDFJC, which implies that these 20 institutions have developed with the

UDFJC strong relationships for promoting science and technologies worldwide considering Bogotá city as one of the main focus of disemisination of scientific works in Colombia.

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