**REVISTA INGENIERÍA**

ISSN 0121-750X

Tipo de artículo: Research/ Review/ Case-study/

Título en inglés:

Título en español:

Primer autor1, segundo autor2, …, último autor3\* (primer nombre segundo nombre primer apellido-segundo apellido)

1Filiación autor 1 (ciudad, país), 2Filiación autor 2, (ciudad, país), filiación autor 3 (ciudad, país)

\*Correo autor de correspondencia:

Fecha de postulación: día/mes/año

**Abstract (maximum 250 words)**

**Context:** A paragraph roughly around 2-3 sentences long, describing briefly the problem or question that motivated the study, a background of previous or related work, and the proposed approach.

**Method:** A paragraph roughly around 3-4 sentences long, describing the principles, protocols, techniques, tools and/or materials (including data, images, databases or primary sources such as interviews, documents or regulations) used to conduct or implement reliably and rigorously the proposed approach.

**Results:** A paragraph roughly around 3-4 sentences long, describing the findings or the outcomes obtained as a result of the method that was conducted.

**Conclusions:** A paragraph roughly around 2-3 sentences long, emphasizing to what extent the results contribute to solve the problem or question stated in the context section, and what avenues for future research remain open. This is the take-home message to the readers.

**Keywords:** keyword1, keyword2, keyword3.

**Acknowledgements:** To other participants, funding agencies or sponsors (optional).

**Language:** (English or Spanish).

**Resumen (300 palabras máximo)**

**Contexto:** Un párrafo de entre 2 y 3 frases, que describa brevemente las preguntas o el problema que motivaron el estudio, los antecedentes o trabajos previos relacionados y el enfoque propuesto (voz activa, tiempo presente).

**Método:** Un párrafo de entre 3 y 4 frases, que describa principios, protocolos, técnicas, herramientas o materiales (datos, imágenes, bases de datos, documentos, normas, entrevistas, etc.) utilizados para efectuar o implementar de manera confiable y rigurosa el enfoque propuesto.

**Resultados:** Un párrafo de entre 3 y 4 frases, que describa los hallazgos o productos resultado del método como fue aplicado.

**Conclusiones:** Un párrafo de entre 2 y 3 frases, que enfatice hasta qué punto los resultados contribuyen a resolver el problema o la pregunta planteada en el contexto inicial, y qué nuevas alternativas de trabajo futuro se desprenden a partir de este. Este es el mensaje central que los autores desean comunicar.

**Palabras clave:** término 1, término 2, término 3

**Agradecimientos:** A otros participantes o patrocinadores del estudio, en caso de ser necesario.

**1. Introduction**

The Ingeniería journal is an open-access academic-scientific online publication specialized in knowledge related to the fields of Engineering and Technology, according to the classification of scientific areas established by the Organization for Economic Cooperation and Development (OECD). Its main goal is to disseminate and promote debates about advances in research and development in the diverse areas of Engineering and Technology. We focus on disseminating original and unpublished articles in English that are relevant at both the national and international level. We seek to provide a platform to share knowledge and foster collaboration between researchers and professionals in the field. The journal does not request any Article Processing Charges (APC), as it is directly funded by Universidad Distrital Francisco José de Caldas. Moreover, the journal operates following a double-blind review process, thus ensuring the impartiality and quality of the published works. The journal is published in a continuous fashion and follows a quarterly numbering.

*Only articles written in English with a maximum of 6000 words will be accepted. If authors require additional pages, they should inform the Editor in advance during the submission process.*

* 1. **Author Guidelines**

We are experiencing issues with our platform's submission system. If you are unable to submit your article using the platform, please consider sending it via email [revingenieria.ud@udistrital.edu.co](mailto:revingenieria.ud@udistrital.edu.co)

-In order to increase the visibility, impact, and internationalization of the Ingeniería journal may include a maximum of 20% of articles by authors with institutional affiliation (i.e., authors from the Universidad Distrital Francisco José de Caldas). Additionally, starting with the 2023 editions, articles by the same author or co-author will not be published in consecutive editions of the journal.

* The article has not been published in the same or different language, nor has it been submitted simultaneously to another journal or conference.
* The content of the article is original and unpublished. Extracts from other sources or works were clearly cited in a precise and proper manner.
* The letter of presentation and originality (this should be signed by each author)
* The category of the article was defined in the Article Submission Template and in the letter of presentation and originality.
* The metadata about each author was entered in the OJS platform.
  1. **Article types**

Papers published in Ingeniería journal are classified according to the nature of the new knowledge it reports, as follows:

* **Scientific and technological research manuscript:** Document that presents, in a detailed manner, the original results of research projects. The generally used structure contains four main parts: introduction, methodology, results and conclusions. These are papers that address a question about a theoretical or applied disciplinary aspect, usually through a scientific study of the behavior of a phenomenon or a situation under certain control conditions.
* **Reflection manuscript:** document that presents research results from an analytic, interpretative or critic perspective from the author, dealing with a specific topic and adopting original sources.
* **Review manuscript:** document that results from research where the results of published or unpublished research on a science or technology field are analyzed, systematized and integrated, in order to state the advances and tendencies in development. It is characterized for presenting a careful bibliographical review of at least 50 references These are papers that present critical, systematic, delimited and exhaustive analyzes on the progress, trends, positive and negative results, gaps and future research routes found in the current state of the art or technique.
* **Editorials, Letters to the Editor, Guest manuscript:** These are the only contributions that do not report new knowledge, but discuss topics of interest for the Journal, for its editorial line or for its community, with an informed opinion style.

1. **Composition of the article**

-According to the Article Submission Template, the first page of the manuscript should include the title of the article in both languages (Spanish and English), full names of the authors, institutional affiliation, city, country, and email address (preferably institutional).

**2.1. Title**

The title of the article should be brief and explanatory. It should answer the reader's question: Is this a relevant article for my research? To this effect, the title should be clear and concise, using keywords relevant to the subject of the article.

**2.2. Abstract**

The journal uses the Structured Abstract, which is designed in four main sections: Context, Methods, Results, and Conclusions. This type of abstract allows for uniformity across articles regardless of their typology, meaning that whether it is a research article, a review, or a case report, it can be adjusted to the proposed structure. It should have a maximum length of 250 words. It must not contain abbreviations, bibliographic references, or unfamiliar characters.

**2.3.** **Keywords**

Keywords consist of a maximum of six (6) words, preferably different from those in the title, reflecting the content of the article and suitable for search engines. It is recommended to use engineering thesauri. They must be arranged alphabetically.

**2.4. Resumen en español**

La revista utiliza el resumen Estructurado que está diseñado en cuatro apartados principales: Contexto, Método, Resultado y Conclusiones. Este tipo de resumen permite dar uniformidad a artículos sin importar la tipología, es decir, que independientemente de si es un artículo de investigación, de revisión, o un reporte de caso, será posible ajustarlo a la estructura propuesta. Debe tener una extensión máxima de 250 palabras. No debe contener abreviaturas, ni referencias bibliográficas, ni caracteres desconocidos.

**2.5. Palabras clave**

Las Palabras clave comprenden un máximo de seis (6) palabras, en lo posible diferentes a las que se relacionan en el título, que reflejen el contenido del artículo y que sean apropiadas para los motores de búsqueda. Se recomienda usar tesauros del área de ingeniería. Deben estar ordenadas alfabéticamente.

**2.6. Introduction**

The introduction plays a pivotal role in any article, offering readers a comprehensive overview of the subject matter. It should outline the topic's relevance, provide a literature review to establish its context and current understanding, and address the research questions at hand. Furthermore, this section should emphasize the novelty of the presented work. It's crucial to clearly articulate the problem being studied, presenting information in a well-organized and coherent manner, adhering to a logical structure, and progressively unveiling details. Typically spanning the initial two pages of the article, the introduction refrains from delving into specific methodological details or study results, reserving such discussions for their respective sections.

**2.7. Methodology**

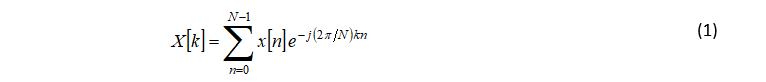
Detailing the methodologies and tools employed to address the research problem and validate or refute the hypothesis. It should offer a comprehensive account of the experimental and analytical procedures undertaken, encompassing aspects such as sample and participant selection, data collection instruments and techniques, data analysis methods, and acknowledgment of any potential biases or limitations inherent in the methodology. Authors must elucidate the rationale behind their chosen methodology and its alignment with the research questions. Moreover, ample detail should be provided to facilitate replication by other researchers. In cases where novel or innovative methodologies are utilized, it's imperative to delineate their distinguishing characteristics and advantages over conventional approaches.

**2.8. Results**

The results section is a crucial component of your manuscript. Ensure that your findings are articulated clearly and concisely, utilizing tables, figures, and graphs where appropriate to enhance comprehension. Emphasize the most relevant results concerning your research questions and provide a thorough interpretation, highlighting the implications and potential applications of your findings. Compare your results with those of previous studies, and critically analyze any limitations or biases in your research methodology.

Systems of units to be used must be MKS or CGS but avoid mixing the two systems. The symbol separating the integer part of the decimal part in a decimal number is the dot “.”. Commas “,” should be used as a thousand separators.

**2.8.1 Equations**

Equations within an article must be numbered in the order of appearance. When referring to equations throughout the text, please refrain from using the abbreviation "Eq." or "eq." and instead write out the full term "equation" or "Equation." The equation number is enclosed in parentheses and aligned to the right-hand side of the column, while the equation itself is centered. Below is an example of the equation for the Discrete Fourier Transform or DFT.

Variables, constants, parameters, indexes, subscripts or superscripts, operators of uncommon use must be defined before or immediately after stating the equation. Ranges or sets of values for variables, indexes or parameters in use should also be defined. The reader should know what quantities were being worked on in the development of the investigation.

If you are using this file as a template, editing the equations can be done through the Microsoft Equation Editor.

**2.8.2. Figures and Tables**

Illustrations, graphs, drawings, images, photographs, etc., should be referred to as figures. Figures are numbered sequentially in the text of the article using Arabic numerals (e.g., Figure 1). All figures must include an explanatory caption. The caption should be brief and not formatted as a title. The word "Figure," the consecutive number (both in bold), and the caption appear below the figure. Do not include the caption within the graph or image; it should be separate text. If the figure has parts, include identifying labels in the assembly. The labels should be "(a)", "(b)", etc. The word "Figure" (with the first letter capitalized) should not be abbreviated in either the text or the caption.

All the figures and images should be upload separately, in one of these formats: **TIFF or EPS**. High-resolution with a minimum 300 dpi (ppp). Named the files as Fig. 1a, Fig. 1b, Fig. 2…

Tables should also be treated as independent objects, similar to Figures. Tables present systematically arranged data to facilitate proper interpretation. Tables are numbered consecutively as they appear in the text of the article. Tables are headed by the word "Table" (with the first letter capitalized, not abbreviated, and in bold) followed by a consecutive Roman numeral (also in bold).

**2.9. Discussion**

The discussion section provides authors with an opportunity to reflect on and analyze the presented results, while also comparing them with relevant studies in the literature. It's crucial for authors to explain the significance and implications of their findings, as well as how they can contribute to addressing the researched problem. Addressing any limitations encountered during the research and suggesting potential improvements for future studies is also important.

**2.10. Conclusions**

Authors should provide a concise summary of the key findings and insights derived from their research in this section, outlining the implications of their work and potential avenues for future investigation.

**2.11. Acknowledgements**

In this section, authors express gratitude to individuals or organizations who provided support, guidance, or resources during the research process.

**2.12.** **Author contributions**

Authors should detail the specific contributions of everyone involved in the research, including conceptualization, methodology, data curation, writing, and review. According to the [CRediT](https://credit.niso.org/) taxonomy.

*Example:*

Author 1: conceptualization, methodology. Author 2: data curation, writing – elaboration of the original draft. Author 3: visualization, research. Author 4: supervision.

**2.13. Access to research data**

Authors should specify how and where readers can access the data underlying the research, ensuring transparency and reproducibility.

**2.14. Conflict of interest**

Authors are required to disclose any potential conflicts of interest that may have influenced the research process or interpretation of results, maintaining transparency and integrity in scholarly endeavors.

**2.15. References**

Bibliographic references for all articles must be included at the end of the document and follow the most current version of the IEEE citation and reference standards.

Authors may use the following document as a reference:

<https://ieeeauthorcenter.ieee.org/wp-content/uploads/IEEE-Reference-Guide.pdf>

**2.16. Authors and biographies**

At the end of the article, a space is reserved for short biographies of the authors, which include an optional photograph with dimensions of 200x200 pixels. In a single paragraph, the authors' undergraduate title, university, city, and country are provided, followed by postgraduate titles, university, city, and country. Then, the current work is detailed, highlighting roles directly related to research groups. Finally, an email address is included for interested readers to contact the author.

**2.17. Appendices**

Authors may include supplementary materials such as additional data tables, figures, or detailed methodological information in the appendices. These materials provide readers with further insights into the research process and support the main findings presented in the manuscript.

1. **Editorial and publishing policies**

## **Focus and Scope**

The *Ingeniería*journal is an open-access academic-scientific online publication specialized in knowledge related to the fields of Engineering and Technology, according to the classification of scientific areas established by the Organization for Economic Cooperation and Development (OECD). Its main goal is to disseminate and promote debates about advances in research and development in the diverse areas of Engineering and Technology. We focus on disseminating original and unpublished articles in English that are relevant at both the national and international level. We seek to provide a platform to share knowledge and foster collaboration between researchers and professionals in the field. The journal does not request any Article Processing Charges (APC), as it is directly funded by Universidad Distrital Francisco José de Caldas. Moreover, the journal operates following a double-blind review process, thus ensuring the impartiality and quality of the published works. The journal is published in a continuous fashion and follows a quarterly numbering.

## **Peer Review Process**

Article processing begins with a review by the Editorial Committee, which assesses whether the manuscript is a good fit for the themes of the journal and validates its content and relevance. If the response of the Editorial Committee is not favorable, the authors will be informed that the article has been rejected, providing arguments described in a review form. If the article is accepted by the Committee, it will be sent for evaluation.

Subsequently, the article will undergo a double-blind peer review. The reviewers, who are experts in the field – preferably external – should submit the report to the editor within four weeks. The Editorial Committee will make one of the following decisions based on the submitted report:

* accept the paper in its present form.
* accept it with minor revisions by the authors.
* accept it with major revisions by the authors.
* reject it.

If the manuscript is accepted with minor or major revisions, the authors will be notified of the reviewers’ comments and recommendations, as well as of the deadline for submitting the revisions. They should submit the new version of the manuscript (the changes should be highlighted) with a letter explaining the revisions made to each of the reviewers’ comments. The Editorial Committee will verify whether the authors have accepted each recommendation, and, if necessary, it will submit the new version of the manuscript for a second round of peer review. It is important to mention that the final decision regarding publication will be subject to the result of the revision process and to the manuscript’s compliance with the guidelines established by the Editorial Committee.

The articles submitted to the *Ingeniería* journal must be unpublished. No articles previously published or submitted by the authors to other national or international media shall be considered for publication.

As per the journal’s statistics, the times involved in the review process depend on the document’s subject matter, with the following averages:

* The initial review, carried out by the Editorial Committee, takes two weeks on average.
* The first peer review takes six months on average.
* The second peer review takes four weeks on average.
* The copyediting and design stage takes four weeks.