Research/ Review/ Case-study/

**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.

**Título en español:**

First Author1, Second Author2, ..., Last Author3\* (Given Name Middle Name First Surname-Second Name)

1Author Affiliation (City, Country), 2Author Affiliation (City, Country), 3Author Affiliation (City, Country)

\*Correspondence E-mail:

**Abstract (maximum 250 words)**

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

**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 reliably and rigorously conduct or implement the proposed approach.

**Results:** A paragraph roughly around 3-4 sentences long, describing the findings or the outcomes obtained with the method applied.

**Conclusions:** A paragraph roughly around 2-3 sentences long, emphasizing to what extent the results contribute to solving the problem or question stated in the context section, as well as what alternatives for future research derive from it. This is the core message that the authors wish to convey.

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

**Resumen (250 palabras máximo)**

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

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

**Conclusiones:** Un párrafo de entre 2 y 3 oraciones 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

**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 levels. 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, we may include a maximum of 20% of articles by authors with institutional affiliation (*i.e.*, authors from 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.

Please make sure that:

* The article has not been published in the same language or a different one, 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 must be clearly cited in a precise and proper manner.
* A letter of presentation and originality (which should be signed by each author) is attached.
* The category of the article is defined in the Article Submission Template and in the letter of presentation and originality.
* The metadata of each author have been entered in the OJS platform.
  1. **Article types**

Papers published in *Ingeniería* journal are classified according to the nature of the new knowledge they report, as follows:

* **Scientific and technological research manuscript.** A document that presents, in a detailed manner, the original results of research projects. The general structure has 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 on the behavior of a phenomenon or a situation under certain controlled conditions.
* **Reflection manuscript.** A document that presents research results from an author’s analytic, interpretive, or critical perspective, dealing with a specific topic and adopting original sources.
* **Review manuscript.** The product of a research work where the results of published or unpublished research within a field of science or technology are analyzed, systematized, and integrated, in order to state the advances made and the current trends. It is characterized by a thorough bibliographical review of at least 50 references. These are papers that present critical, systematic, delimited, and exhaustive analyses on the progress, trends, positive and negative results, gaps, and future research routes found in the current state of the art.
* **Editorials, letters to the editor, and guest manuscripts.** 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. The Editor-in-Chief is limited to publishing only one editorial note per year.

1. **Article structure**

The first page of the manuscript should include the title of the article in both languages (Spanish and English) and the full names of the authors and their 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?* The title should be clear and concise, using keywords relevant to the subject of the article.

**2.2. Abstract**

Our journal uses structured abstracts comprising four main sections: context, methods, results, and conclusions. This type of abstract allows for uniformity regardless of the article type. The abstract should have no more than 250 words, and it must not contain bibliographic references. The Spanish version of this text, **a faithful translation of the original**, must also be uploaded.

**2.3.** **Keywords**

A maximum of six keywords should be included after the abstract, preferably different from those in the title, which should reflect the content of the article and be suitable for search engines. The use of engineering thesauri is advised. The keywords must be arranged alphabetically, and the Spanish equivalent of each keyword must be attached after the translated version of the abstract.

**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 is crucial to clearly articulate the problem under study, presenting information in a well-organized and coherent manner while adhering to a logical structure and progressively unveiling details. Typically spanning the first two pages of the main text, the introduction refrains from delving into specific methodological details or study results, reserving such discussions for later sections.

**2.7. Methodology**

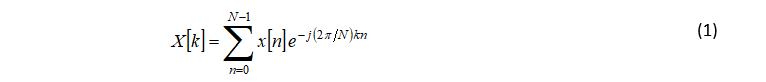
This section presents the methodologies and tools employed to address the research problem and validate or refute the hypothesis. It should offer a comprehensive account of the experimental and analytical procedures undertaken, encompassing aspects such as sample and participant selection, data collection instruments and techniques, data analysis methods, and the acknowledgment of any potential biases or limitations. The 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 is imperative to outline their distinguishing characteristics and advantages over conventional approaches.

**2.8. Results**

The results section is a crucial component of any manuscript. All findings are to be articulated clearly and concisely, utilizing tables, figures, and graphs to enhance comprehension. The most relevant results regarding the research questions should be presented, providing a thorough interpretation that highlights the implications and potential applications of the work’s findings. The results should be compared against those of previous studies, and any limitations or biases in the research methodology must be critically analyzed.

MKS or CGS unit systems can be used but not mixed. A dot (“.”) must be used as decimal separator, and a space should be used to separate thousands, except in four-digit numbers (*e.g.*, 3.21, 1498.03, 10 485.6).

**2.8.1 Equations**

All equations in the article must be numbered in order of appearance. When referring to equations in the main text, the abbreviation "Eq." should be used. The equation number should be in parentheses and aligned to the right-hand side, while the equation itself is to be centered. Below is an example of the equation for the Discrete Fourier Transform (DFT).

Variables, constants, parameters, indices, subscripts or superscripts, and operators of uncommon use must be defined before or immediately after presenting any equation. All ranges or sets of values for variables, indices, or parameters should also be defined. The reader should be able to clearly understand what quantities were used on in the development of the investigation.

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

**2.8.2. Figures and tables**

Illustrations, graphs, drawings, images, photographs, *etc.* should be referred to as Figures. Figures should be numbered sequentially in the text of the article using Arabic numerals and an abbreviation (*e.g.*, Fig. 1). All figures must include an explanatory caption, which should be brief and not formatted as a title. The word "Figure," its number (both in bold), and the caption should appear below the figure. Do not include the caption within the figure. If the figure has parts, identifying labels are to be included, *e.g.*, a), b), *etc.*

All figures should be upload separately, in **TIFF or EPS** format. High-resolution files with a minimum 300 dpi (ppp) are accepted. These files should be labeled as Figure 1a, Figure 1b, *etc.*

Diagrama

Descripción generada automáticamente

Figure 1. Representation of human lower limb for dynamic modeling [1]

Tables should also be treated as independent objects. They are meant to present systematically arranged data to facilitate proper interpretation. They should be numbered consecutively in order of appearance and are introduced by the word "Table" (with the first letter capitalized, not abbreviated, and in bold), followed by a Roman numeral (also in bold), *e.g.*, Table I.

Table I

Parameters of the plant model for human lower limb motion

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Segment** | **Parameter** | **Symbol** | **Value** | **Unit** |
| Thigh | Mass |  |  |  |
| Length |  |  |  |
| Proximal center of gravity |  |  |  |
| Radius of gyration |  |  |  |
| Moment of inertia |  |  |  |
| Viscous damping coefficient |  |  |  |

**2.9. Discussion**

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

**2.10. Conclusions**

In this section, the authors should provide a concise summary of the key findings and insights derived from their research, outlining the implications of their work and future lines of research.

**2.11. Acknowledgements**

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

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

The authors should detail the specific contributions of everyone involved in the research, including conceptualization, methodology, data curation, writing, and revision. This should be done according to the [CRediT](https://credit.niso.org/) taxonomy.

*Example:*

Author 1: conceptualization, methodology. Author 2: data curation, writing (original draft). Author 3: visualization, research. Author 4: supervision.

**2.13. Access to research data**

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

**2.14. Conflict of interest**

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

**2.15. Citation and references**

All sources must be cited in order of appearance with a number between brackets. If a quotation is included in the text, the page number must be included within these brackets. Here are some examples:

[1], [3 p. 200], [4]-[12]

Bibliographic references for all articles must be included at the end of the document and follow the aforementioned standard.

Author names should be included in the following format:

L. A. Surname(s), L. A. Surname(s), and L. A. Surname(s)

All sources with more than six authors must include only the first author name and add et al.

L. A. Surname(s) et al.

Authors may use the following document as a reference: <https://ieeeauthorcenter.ieee.org/wp-content/uploads/IEEE-Reference-Guide.pdf>

Here are some useful examples of the most commonly cited types of text:

* Journal article
  + K. Dokter, F. Gadducci, B. Lion, and F. Santini, "Soft constraint automata with memory," *J. Logical Alg. Meth. Programm.*, vol. 118, art. 100615, 2021. <https://doi.org/10.1016/j.jlamp.2020.100615>
* Conference paper
  + R. M. Azuma, G. P. Coelho, and F. J. Von Zuben, “Evolutionary multi-objective optimization for the vendor-managed inventory routing problem,” in *2011 IEEE Cong. Evol. Comp.*, 2011, pp. 1457-1464. <https://doi.org/10.1109/CEC.2011.5949787>
* Book
  + E. G. Vázquez and T. G. Saiz, *Introduction to the theory of automata, grammars and languages*, Madrid, Spain: Editorial Universitaria Ramón Areces, 2022.
* Edited book
  + T. Yamakami, "Between SC and LOGDCFL: Families of languages accepted by polynomial-time logarithmic-space deterministic auxiliary depth-k storage automata," in *Computing and Combinatorics*, C. Y. Chen, W. K. Hon, L. J. Hung, and C. W. Lee, Eds., Berlin, Germany: Springer, 2021, pp. 164-175. <https://doi.org/10.1007/978-3-030-89543-3_14>
* Website
  + H. Tschabitscher, "LifeWire," 2021. [Online]. Available: <https://www.lifewire.com/are-email-addresses-case-sensitive-1171111>
* Thesis
  + D. Schwartz, “Development of a computationally efficient full human body finite element model,” M.S. thesis, Virginia Tech – Wake Forest Univ. School of Biomed. Eng. Sci., Winston-Salem, NC, USA, 2015. [Online]. Available: <https://wakespace.lib.wfu.edu/bitstream/handle/10339/57119/Schwartz_wfu_0248M_10697.pdf>

**2.16. Authors and biographies**

At the end of the article, a space is reserved for short author biographies, which may include an 200 x 200 pixel photograph. Here, in a single paragraph, the authors' degrees, university, city, and country should be provided. Then, their current work or affiliation could be detailed, as well as their research interests. An email address may included for interested readers to contact the author.

**2.17. Appendices**

Here, the authors may include supplementary materials, *e.g.*, additional data tables, figures, or detailed methodological information. 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**

**3.1 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 levels. 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:

* accepting the paper in its present form.
* accepting it with minor revisions by the authors.
* accepting it with major revisions by the authors.
* rejecting 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 review 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.

**References**

[1] J. L. Sarmiento-Ramos, A. F. Meneses-Castro, and P. J. Jaimes-Mantilla, “Dynamic Model of Lower Limb Motion in the Sagittal Plane during the Gait Cycle”, *Ing.*, vol. 29, no. 1, p. e20333, Jan. 2024. <https://doi.org/10.14483/23448393.20333>