PUC Minas
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Instituto de Ciências Exatas e Informática

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# Title of the Paper in English[1*]

Title of the Paper in Portuguese

Name of the First Author[2] Name of the Second Author[3]

**Abstract**

In the abstract, the authors should present briefly the relevant points of the article in a single paragraph, summarizing the object of the study, objective, methodology, results, and final considerations. Use the active voice and the verb in the first person. Do not include names of authors and references. In the appropriate field, just below the abstract, the authors should indicate the keywords (from three to five, separated by a period) that best represent the content of the study. The abstract should have 100 (one hundred) to 250 (two hundred and fifty) words, letter size 11pt with spacing of 1.5 between lines.

**Keywords:** Template. LaTeX. Abakós. Journals.

[1*] Submitted on DD/MM/AAAA - Accepted on DD/MM/AAAA

[2] Author's institution 1, Brasil– author1@email.edu.br

[3] Author's institution 2, Brasil– author2@email.edu.br

**Resumo**

O resumo consiste em uma apresentação sucinta de pontos relevantes do artigo em um parágrafo único, contendo o objeto de estudo, objetivo, metodologia, resultados e conside- rações finais. Deve-se usar o verbo na voz ativa e na terceira pessoa do singular. O resumo não deve conter nomes de autores e referências. Logo abaixo do resumo, deve-se indicar as palavras-chave (de três a cinco, separadas por um ponto final) que representam o conteúdo do estudo. O resumo deve ter de 100 (cem) a 250 (duzentos e cinquenta) palavras, letra tamanho 11pt com espaço de 1,5 entre as linhas.

**Palavras-chave:** Template. LaTEX. Abakós. Periódicos.

# 1 INTRODUCTION

This document shows how a manuscript submitted for consideration by Abakós must be structured. This template[4] illustrates the desired format. Authors are free to edit this document and include the content of their scientific work while preserving the formatting.

In general, all the text included here, from the introduction to the final considerations, must obey the following guidelines:

Paragraph indentation of 1.25 centimeters;

Letter size 12pt;

Times New Roman font;
Line spacing of 1.5;
Text in justified
format.

In the following, Section 2 presents guidelines for section and subsection formatting. Section 3 has instructions for including figures, tables, equations, and algorithms in the text. Section 4 presents guidelines for the elaboration of the list of references and direct citations. And finally, Section 5 presents guidelines for the concluding section.

# 2 SECTION AND SUBSECTION FORMATTING

The titles of the sections must be in uppercase, bold and size 12 formatting. Every section title must be followed by text. Use progressive numbering, in Arabic numerals, for textual sections (limited to the fifth section), which must be distinguished among them by graphic resources (PONTIFÍCIA UNIVERSIDADE CATÓLICA DE MINAS GERAIS, 2023).

Titles of secondary subsections must be in lowercase, bold, and size 12 formatting. Titles of tertiary subsections must be in lowercase, italics, and size 12 formatting. Finally, titles of quaternary subsections must be in lowercase, underlined, bold, and size 12 formatting. Next, we show some examples of the desired format:

[4] All words in a foreign language must be in italics, except the text in the abstract and references.

## 2.1 Example of Secondary subsection

### *2.1.1 Example of Tertiary subsection*

#### 2.1.1.1 Example of Quaternary subsection

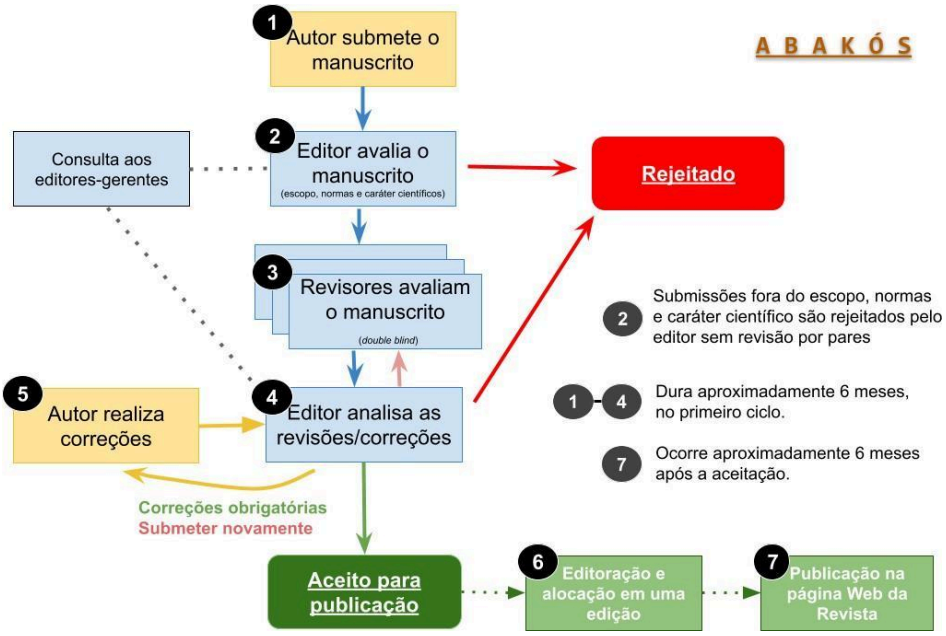
# 3 FIGURES, TABLES, EQUATIONS, AND ALGORITHMS

Images, tables, and algorithms must be centralized, respecting the paper margins. If the data was extracted from the research, the expression "Research data" should be used to indicate the source.

## 3.1 Figures

Screenshots of software, maps, graphics, and diagrams should be inserted as figures and referred to in the text. Figure 1 shows the schematic of the revision process of manuscripts submitted to Abakós, as an example of a figure with a diagram. It is essential to indicate the source "Research data" for this example, meaning that the figure was elaborated by the authors.

**Figura 1 – Abakós Evaluation Process**

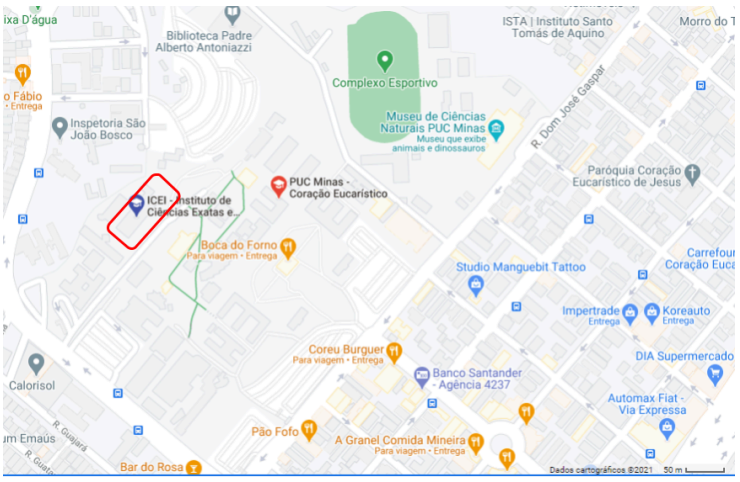



**Fonte: Research data.**

Figure 2 is a map showing the localization of the Institute of Exact Science and Informatics (ICEI) at PUC Minas in the Coração Eucarístico campus, Belo Horizonte, Minas Gerais, Brazil. In

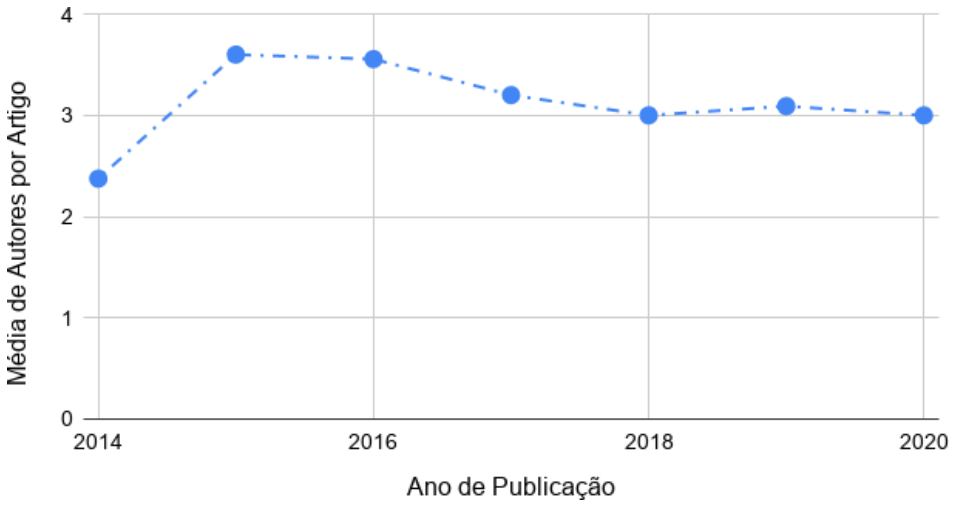
this figure, the source is "*Google Maps* [4]", a system for search and visualization of maps and satellite images. We also indicate the electronic address of the system and the date the image was captured. **Copyrights of the figures used in the paper are the authors' responsibility.** Figure 3 is an example of how to insert a graph into the text. It is essential to observe that graphs follow the same rules as figures. Every figure inserted must be cited and contextualized in the text. For example, Figure 3 shows that the average number of authors per published paper in Abakós was approximately three.

**Figure 2 – Map locating ICEI at PUC Minas**




**Source: Google Maps[5].**

**Figura 3 – Average number of authors in published papers in the Abakós by year, from 2014 to 2020**




**Source: Research data.**

## 3.2 Tables

[5] Available at: <https://www.google.com.br/maps>. Accessed: 12 Apr. 2021.

Information arranged in rows and columns should be organized in tables to facilitate the data analysis. Tables with statistical data must have the ends open, vertical lines separating the columns, and horizontal space separating the header. Textual data arranged in rows and columns must also be in a table as in Table 1 which shows the number of papers and issues published by Abakós from 2016 to 2020.

**Table 1 – Number of papers and issues published by Abakós between 2016 and 2020**

| Year | Number of papers | Number of issues |
|---|---|---|
| 2020 | 11 | 2 |
| 2019 | 12 | 2 |
| 2018 | 10 | 2 |
| 2017 | 10 | 2 |
| 2016 | 10 | 2 |

**Source: Research data.**

### 3.3 Equations

Equations may appear in the text, as part of a phrase, as in $y = x^2 + 1$, using mathematical format; or outside the text, referred to by numbers. For example, Equation 1, Equation 2 and Equation 3 were proposed in the literature as ways to calculate the credibility of humans when performing computation on their cognitive systems (Ponciano; Brasileiro, 2018).

$$y_{i,d} = \frac{\sum_{\omega \epsilon Y_{i,d}} s_{\omega,d}}{|Y_{i,d}|} \quad (1)$$

$$x_{i,d} = \frac{\sum_{\omega \epsilon X_{i,d}} s_{\omega,d}}{|X_{i,d}|} \quad (2)$$

$$r_{i,d} = \frac{s_{i,d} + y_{i,d} - x_{i,d} + 1}{3}, \; r_{i,d} \epsilon [0, 1]. \quad (3)$$

### 3.4 Algorithms

Authors may insert algorithms in the text and refer to them by a number, as in Algorithm 1. The algorithms should exhibit their inputs and outputs. In the example of Algorithm 1, the input is a number vector (*list*), and the output is the maximum value in the vector (defined as *biggest_item*). We recommend the package LATEX *algorithmic*, used in this example. Do not forget to enumerate the lines!

**Algorithm 1:** Maximum Value in the Vector

**Require:** *list*
**Ensure:** *biggest_item*
1: *biggest_item* ⇐ *list*[0]
2: **for all** *item* in *list* **do**
3: **if** *item* > *biggest_item* **then**
4: *biggest_item* ⇐ *item*
5: **end if**
6: **end for**

## 4 HINTS: CITATIONS AND REFERENCES

All the citations, including in-text citations, should follow the ABNT format. We recommend strongly that authors consult the document Elaboration of References and the document of citations and references (Pontifícia Universidade Católica de Minas Gerais, 2023)[6].

[6] Available at: <http://portal.pucminas.br/biblioteca/documentos/Guia-ABNT-referencias.pdf>. Accessed: 10 of Nov. 2023.

### 4.1 How to handle in-text citations

Use the surname of the author/authors and the year of the publication to cite scientific works (papers, books, theses) in the text, as shown below:

- "According to Dickman and Ponciano (2020)..." *[If it is in the text]*
- "The data diverged as predicted in the literature (Dickman; Ponciano, 2020)" *[If it is enclosed in brackets]*
- For three authors or more use "Dickman et al. (2020)", in the text or "(Dickman *et al*., 2020) otherwise".

The list of references should include all the works cited in the text. As a rule, only cited works should appear in the list.

### 4.2 How to handle the reference list

References should be in alphabetical order according to the last name of the first author. When there is more than one work by the same author, the order should obey the order of citation in the text.

It is important to observe that the citations are standardized so that only the initials of the name (except the last name) should be used, as in: DICKMAN, A. G.; PONCIANO, L.

In the following we show some examples of citations; for more details please see the links indicated above.

- For books (ARROYO, 2013):

  ARROYO, M. G. **Ofício de mestre**: Imagens e auto-imagens. 15.ed. Petrópolis: Vozes, 2013.

- For book chapters (BORDIEU, 2011):

  BORDIEU, P. Espaço social e espaço simbólico. *In*: BORDIEU, P. **Razões práticas**: sobre a teoria da ação. 11.ed. Tradução: Mariza Corrêa. Campinas: Papirus, 2011. cap.1, pp.13.27.

- For papers in a journal (FERREIRA; DICKMAN, 2015):

  FERREIRA, A.C.; DICKMAN, A.G. História oral: um método para investigar o ensino de física para estudantes cegos. **Revista Brasileira de Educação Especial**, v.21, n.2,

p.245-58, 2015.

- For work published in conference procceedings (KOGUT, 2015):

  KOGUT, M.C. A formação docente: Os saberes e a identidade do professor. *In*: CONGRESSO NACIONAL DE EDUCAÇÃO, 12., 2015, Curitiba. **Anais [. . . ]**. Curitiba: PUCPR, 2015.

- For dissertations (PERTENCE, 2021):

  PERTENCE, M.L.B. **Ensino de física para estudantes cegos**: Oficina sobre criação e adaptação de materiais didáticos para professores e licenciandos. 2021. Dissertação (Mestrado em Ensino) - Pontifícia Universidade Católica de Minas Gerais, Belo Horizonte, 2021.

- For theses (DICKMAN, 1996):

  DICKMAN, A.G. **Transições de Fases de Não-equilíbrio em Sistemas de Partículas Interagentes** 1996. Tese (Doutorado em Física) - Universidade Federal de Minas Gerais, Belo Horizonte, 1996.

In the reference list, we also included examples of papers in conference procceedings (Ponciano *et al.*, 2017), papers in journals (Ponciano; Brasileiro, 2018), book (Swokowski; Flores; Moreno, 1994) and book chapter.

## 5 FINAL CONSIDERATIONS

The final considerations should agree with the goals of the investigation carried out, avoiding discussions of new results, citations or interpretations of other authors. It should contain a brief description of the problem, objectives, and the methodology used; followed by a summary of the main results, contributions of the work, its relationship with the literature; and a discussion about possible future work.

## REFERENCES

ARROYO, M. G. **Ofício de mestre**: Imagens e auto-imagens. 15. ed. Petrópolis: Vozes, 2013.

BORDIEU, P. Espaço social e espaço simbólico. In: BORDIEU, P. (Org.). **Razões práticas**: sobre a teoria da ação. 11. ed. Campinas: Papirus, 2011. cap. 1, p. 13–27.

DICKMAN, A. G. **Transições de Fases de Não-equilíbrio em Sistemas de Partículas Interagentes**. 1996. Tese (Doutorado) — Universidade Federal de Minas Gerais, Belo Horizonte, 1996.

FERREIRA, A. C.; DICKMAN, A. G. História oral: um método para investigar o ensino de física para estudantes cegos. **Revista Brasileira de Educação Especial**, v. 21, n. 2, p. 245–258, 2015.

KOGUT, M. C. A formação docente: Os saberes e a identidade do professor. In: CONGRESSO NACIONAL DE EDUCAÇÃO, 12., 2015, Curitiba. **Anais [...]**. Curitiba: PUCPR, 2015.

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SWOKOWSKI, E. W.; FLORES, V. R. L. F.; MORENO, M. Q. **Cálculo de geometria analítica**. Tradução: Alfredo Alves de Faria. Revisão técnica: Antonio Pertence Júnior. 2. ed. São Paulo: Makron Books do Brasil, 1994.