

and the margins of the text must be lower of 1.5 cm, upper, of 2.5 cm, right of 1.25 cm and left of 3 cm. The text of the entire manuscript, including the titles of each section and sub-title, must be typed with Times New Roman font, size 12, justified aligned.

The title of each section is a first-order header and must be numbered with Arabic numerals, aligned to the left in bold. Spacings of 6 pt before and 12 pt after the text must be given.

It is recommended that this template provided by jCEC be used to write the entire manuscript. That way, these guidelines will be properly observed. Articles written in Portuguese, English or Spanish must have the same format. The first line of each paragraph must start with a 1-cm tabulation from the left margin with fully-justified alignment. The manuscript must be written with a minimal of 5 (five) and a maximal of 25 (twenty-five) pages.

3. Methods

Methods section should explain detail information about location, time, sample or population, research variables, research procedures, how the data to be collected and analyzed. The number of methodology subsections can be adjusted.

3.1 Second-Order Header in italic, left aligned

The second-order headers must be aligned to the left margin and must be written in italic, with only the first letter of each word in upper case.

Third-order header: This header must start after a 1-cm tabulation from the left margin of this column, without numbering, and must be written with underlined characters. Only the first letter of the first word must be upper-case. The main text should start in the same line of the header.

4. Results and Discussions

Results and Discussions contain results obtained by author during the research activities. The results of the research submitted in advanced as whole which continues by doing the discussion. The discussions are presented systematically from general to the specific. The data can be presented with tables or figures. Results and discussions must also interconnect with theory that used. Avoid excessive use of citations and discussion of published literature.

5. Figures

Figures may be colored or not, and must be inserted in the main body of the manuscript as close as possible from the point where they are cited in the text. They must be centralized and should not exceed the margins defined for the page. It is recommended that a minimal of 300-dpi resolution be used in digitized figures. They should be preferably saved in the JPG format. Each figure must have a caption in Arabic numerals. The caption must be centralized just below the figure itself, and separated by a single space before the corresponding text and double space after it. The format to be followed is: Figure 1 – Caption of the figure, with a final dot. In the main text, they should necessarily be mentioned or cited as in the example: “As shown by Figure 1, ...” . Please see other examples below:

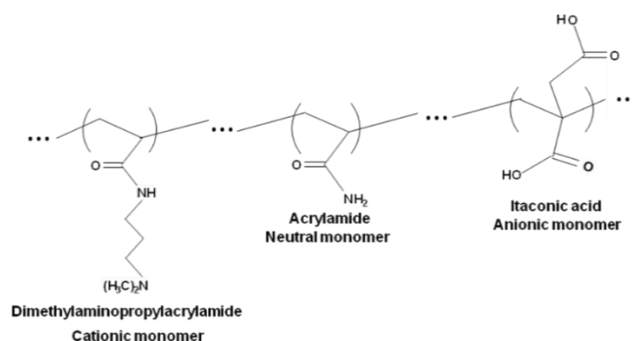


Figure 1 - Polyampholyte molecular composition prepared by random, free-radical polymerization. (Bold, size 12)

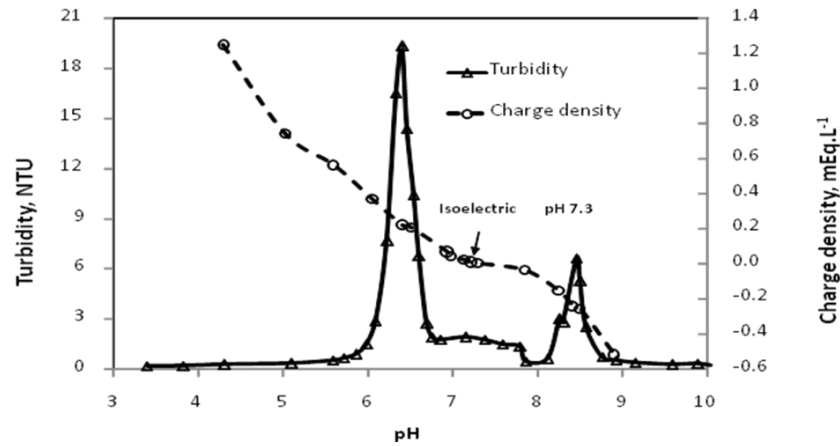


Figure 2 – Digital structure of a hybrid velocity/position fuzzy-PID controller.

6. Tables

Tables and/or charts must be adapted or adjusted to the page window and must be shown after and as close as possible from the point where they are cited in the text. Their captions must be aligned to the left just before the table itself with single spaces before and after the text, and must be typed as: Table 1 – Caption of the table, with a final dot. All tables must be cited in the text, as in the example: “The results of the experimental planning are shown in Table 1.” The measuring units of all parameters discussed in the work must be clearly declared, preferably in the International System format. It is recommended that a slash (/) be used to separate the name of the parameter and its corresponding unit whenever possible (see example on the table below; this format may also be used in the captions of graph axes).

Table 1 – Fuzzy rules for controllers Fuzzy-PI and Fuzzy-PID.

Fuzzy-PI controller							
$\Delta e(k) e(k)$	NL	NM	NS	ZR	PS	PM	PL
PL	ZR	PS	PM	PL	PL	PL	PL
PM	NS	ZR	PS	PM	PL	PL	PL
PS	NM	NS	ZR	PS	PM	PL	PL
ZR	NL	NM	NS	ZR	PS	PM	PL
NS	NL	NL	NM	NS	ZR	PS	PM
NM	NL	NL	NL	NM	NS	ZR	PS
NL	NL	NL	NL	NL	NM	NS	ZR

Table 2 - Fiber Quality Analysis.

Parameter	Mean length / mm	Mean width / μm	Fines / %	Vessel / #	Vessel length / mm	Vessel width / μm
Arithmetic average	0.719	16.43	0.689	6.5	0.533	133.48
Standard deviation	0.006	0.096	0.059	2.082	0.032	9.194

Note: The number of fibers counted was 3000. The fine fraction was classified as such if the fibrous elements had an effective dimension between 0.05 and 0.2 mm. (Table notes must be given in Font Size 9 and aligned to the left)

7. Equations

All equations must be typed in italics after a 0-cm tabulation from the left margin of the column, with a consecutive numbering in Arabic numerals between parentheses right aligned. All equations must be cited in the text, according to the example: “Replacement of Equation 1 on Equation 3 gives Equation 5 ...”. If any equation is written in more than one line, the corresponding number must be given on the last line, also between parentheses and aligned to the left of the corresponding column. See example below.

$$\frac{\partial X}{\partial t} = \nabla(D_{eff} \nabla X) \quad (1)$$

where X is the moisture content, [kg H₂O/ kg dry mass], t is time, [s], and D_{eff} is the effective diffusivity, [m² s⁻¹].

8. Conclusions

The conclusion contains the main points of the article. Conclusions should not repeat what has been written in the Results and Discussion section, but discuss important results, applications and developments of the research carried out. This section should also be able to show whether the research objectives can be achieved. Conclusions are written in description paragraph form. Avoid using bulleted lists.

Acknowledgements

The authors appreciate the financial support from... This section gives appreciation to individuals and organizations that provide assistance to the author. Acknowledgments to sponsors and financial support are also included in this section.

References

All references must be written in the formats given below, which are based on American Psychological Association – APA (alphabetical order or numerical order). They should all be cited in the text by the first author's surname of the first author of the reference, followed by “et al.”, if that is the case, and year of publication between parentheses, as in: “Reports by Smith et al. (2009) and Schmidt et al. (2012) showed that ...”. In case the citations appear after the main text, the following format is suggested: “... such results have already been discussed in the literature (Armstrong et al., 2014; Fischer et al., 2015; Williamson et al., 2013)”. In this case, note that alphabetical order by the author's surname must be observed to list these references. In the case of two authors, the reference must be cited as: “... according to Armstrong and Fischer (1995), ...”. If three or more authors are involved, cite only the first author and use “et al.”, as in the previous examples. If different reports by the same authors have been published in the same year, please use letters a, b, c... after the publication year, as in the example: “Works by Smith et al. (2005 a, b) showed that ...”.

The list of references must contain only items that have been cited in the main text, and should be presented in alphabetical order according to the first author's surname. The references should be aligned to the left, with a 1-cm tabulation from the second line. The surnames and initials of all authors should be declared, separated by semicolons. See examples below.

Basic Form:

(Doubts - Please see:

https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html)

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periodical title is run in title case, and is followed by the volume number which, with the title, is also italicized. If a DOI has been assigned to the article that you are using, you should include this after the page numbers for the article. If no DOI has been assigned and you are accessing the periodical online, use the URL of the website from which you are retrieving the periodical.

Author, A. A., Author, B. B., & Author, C. C. (Year). Title of article. *Title of Periodical*, volume number (issue number), pages. <https://doi.org/xx.xxx/yyyy>

Articles in Journal:

Mota, A. S., Menezes, M. R., Schmitz, J. E., da Costa, T. V., da Silva, F. V., & Franco, I. C. (2016). Identification and online validation of a pH neutralization process using an adaptive network-based fuzzy inference system. *Chemical Engineering Communications*, 203(4), 516–526. doi: <https://doi.org/10.1080/00986445.2015.1048799>

Muftah, A. F. (2020). Productivity enhancement of stepped solar still integrated MEMS light sensors for solar tracker. *The Journal of Engineering and Exact Sciences*, 6(5), 0666–0667. <https://doi.org/10.18540/jcecvl6iss5pp0666-0667>

Siqueira, A. M. de O., Monteiro, S. A., Araújo, W. dos R. M., Silva, G. S., & Andrade, A. O. de. (2019). A preliminary investigation on teaching styles in higher education. *International Journal of Advanced Engineering Research and Science*, 6(1), 161–168. <https://doi.org/10.22161/ijaers.6.1.22>

Dissertations and theses:

Carmo, F. M. S. (2003). *Estudo de polimorfismo do gene candidato, o fator miogênico-5 (myf -5), em suínos*. Tese de Doutorado, Universidade Federal de Viçosa, Viçosa, MG, Brasil.

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Santos, M. L. (2001). *Crescimento e alocação de biomassa e de nutrientes em eucalipto, decorrentes da aplicação de nitrogênio e potássio*. Dissertação de Mestrado, Universidade Federal de Viçosa, Viçosa, MG, Brasil.

Works in proceedings of scientific events:

Fonseca, R. R., Franco, I. C., & Silva, F. V. da. (2016). Bioreactor temperature control using a generic fuzzy feedforward control system. 841: Intelligent Systems and Control. Modelling, Simulation and Identification / 841: Intelligent Systems and Control, Campinas, Brazil. <https://doi.org/10.2316/P.2016.841-024>

Books:

Seborg, D. (2011). *Process dynamics and control*. Wiley.

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