LORA COMMUNICATION SYSTEM FOR EARLY MONITORING OF LAKE WATER TOXICITY IN FLOATING NET CAGES

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Abstract— The abstract must contain a background that contains the problems to be solved in the article. Furthermore, the purpose and research methods are also briefly explained in the abstract. In the last section, the abstract contains the main results and the most important conclusions of the research. This template contains basic guidelines for preparing manuscripts for publication in the Electrical Engineering Journal. The manuscript begins with writing an abstract in Indonesian and English with a maximum length of 200 words. The abstract is only written in one paragraph. Often, only the abstract of the manuscript is read; therefore, write the main findings or contributions of the manuscript as briefly as possible.

Keywords: Write a maximum of 5 (five) keywords or keyword phrases separated by commas from each other, and do not end with a period (Times New Roman font, bold, 9-point font size)

I. INTRODUCTION

Jurnal Rekayasa Elektrika accepts manuscripts in the field of electricity, covering electric power, control, telecommunications, electronics, computers, and signal processing. Manuscripts can be research manuscripts, or literature reviews. They will undergo double-blind reviewing.

Research and design manuscripts are basically written in three parts, namely Introduction, Contents, and Discussion and Conclusions. Specifically, the first part of a research article is the Introduction. The second and third parts are, respectively, Literature Study and Methods. The fourth and fifth parts are Results and Discussion and Conclusions. Design articles can begin with Introduction, Design/Planning, then continue with the Results and Discussion section, and Conclusions. Manuscripts in the form of literature reviews should have a logical flow of ideas, use the latest reading list in the field being reviewed, and present previous research clearly and comprehensively.

The introduction section contains motivation (background of the research/design), objectives of the research/design, position of the research/design relative to previous research/design, including the novelty of the research/design compared to what has been done, and literature review. A comprehensive literature review can be written as a separate section in section II.

A. Article's writing

Prepare your manuscript on A4 paper (210 x 297 mm), with a maximum of 8 pages, including figures and tables. A manuscript of less than 6 pages can be assumed to be insufficient in either background, method, results, or discussion so that it may be rejected immediately without review.

Font size and format: To write each element of the manuscript, follow the font size and format as stated in Table 1, using Times New Roman font.

Margins: top = 25 mm and bottom = 20 mm, left and right = 18 mm. The manuscript is written in two columns, each column size of 81.87 mm and a distance between columns of 6.25 mm. Arrange the manuscript to be aligned left and right in each column. On the last page, adjust the column length so that the left and right columns are the same length.

II. LITERATURE STUDY (OPTIONAL)

The *Literature Study* section is optional. This section discusses the basic theory of the research, which is considered important to present. This section also discusses other research and/or designs that are relevant to the research presented in this manuscript. The *Literature Study* section may not exist if the basic theory/relevant research can be integrated into the *Introduction* section.

III. Method/design

A. Figure and Table

The method contains information about the implementation of the research, including the flow of the research implementation, the tools and materials used, the research location, and other things that are considered necessary. The method should be written in detail, with the intention that readers who are interested in repeating this research can do so with the information written in the 'Method' section.

Position figures and tables at the top and bottom of the column (not in the middle of the text). Remember, image files are also sent separately in JPEG format to maintain this high standard of quality.

Large figures and tables can be placed in the middle of the page by combining both columns. Figure titles should be centered below the figure if they only consist of one line; for titles that are more than one line, they are left-justified as in Figure 1. Table titles should be centered above the table if they only consist of one line; for titles that are more than one line, they are justified. Figures and tables should be mentioned first in the text and then displayed.

The name of the figure axis is written as, for example, "Magnetization" or "Magnetization, M," not just "M." Then, write the units in parentheses. Do not name the axis only with the units. The font size on the figure label must be legible, at least 10 points.

B. Reference

Number the publications in the References section consecutively within square brackets [1]. A period follows the brackets [2]. All references should then be cited in the manuscript. To refer to 1, 2, and 3, use [1]-[3]. To refer to 1 and 3, use [1], [3].

Number footnotes in superscript format. Place the footnote at the bottom of the column where the footnote number is inserted. Do not use footnotes in the references.

List all authors' names. Manuscripts that have not been published, even if submitted for publication, should be referred to as "unpublished" [4]. Manuscripts that have been accepted for publication are referred to as "in press" [5]. In the title of the manuscript, the first word of each word should be capitalized, except conjunctions and prepositions that are less than 7 characters long.

C. Abbreviations and Acronyms

Define abbreviations and acronyms the first time they are used in the text, even if they have been defined in the abstract.

Abbreviations such as IEEE, SI, MKS, CGS, sc, dc, and rms do not need to be redefined. Do not use abbreviations in the title unless there is no other option.

D. Equations

Number the equations sequentially with the equation number in parentheses aligned to the right margin, as in (1). To make the equation representation more compact, use the exp function or the appropriate exponent. For quantities and variables, italicize Roman symbols, not Greek symbols. Use an en dash (−) and not a hyphen for the minus sign. Use parentheses to clarify the denominator of a fraction. Separate the equations with commas if they

are part of a sentence, as in the following example,

$$a + b = c \quad (1)$$

Symbols in equations should be defined before the equation appears or immediately afterward. Use "(1)," not "Eq. (1)" or "equation (1)," except at the beginning of a sentence: "Equation (1) is …"

Table 1. Font size and Format

IV. Results and Discussion

The research/design results are discussed and compared with those from the referenced articles.

V. Conclusion

The conclusion is written in narrative form, not in itemized form. If there is a description for future research development, it can also be written in this section.

Reference

[1] G. Eason, B. Noble, and I. N. Sneddon, "On certain integrals of Lipschitz-Hankel type involving products of Bessel functions," *Phil. Trans. Roy. Soc. London*, vol. A247, pp. 529–551, April 1955.

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[4] K. Elissa, "Title of paper if known," unpublished.

[5] Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, "Electron spectroscopy studies on magneto-optical media and plastic substrate interface," IEEE Transl. J. Magn. Japan, vol. 2, pp. 740–741, August 1987 [Digests 9th Annual Conf. Magnetics Japan, p. 301, 1982].

[6] M. M'Saad, M. Bouslimani, and M. A. Latifi, "PID adaptive control of exothermic stirred tank reactors," in *Proc. 2nd IEEE Conference on Control Applications*, Sep. 1993, pp. 113–117.

[7] R. Murray and B. Grunloh. (view Jan. 2013). FAQ: what is steady-state error? [Online]. Available: http://www.cds.caltech.edu/~murray/amwiki/index.php/FAQ:_What_is_steady_state_error%3F.

[8] A complete guide can be accessed at https://ieee-dataport.org/sites/default/files/analysis/27/IEEE%20Citation%20Guidelines.pdf

Figure SEQ Gambar * ARABIC 1. Schematic example of an ellipse surrounded by a rectangular image