**Guidelines for Preparing Technical Report**

Author’s Name 1, Author’s Name 2, Author’s Name 3, Author’s Name 4, Author’s Name 5, Author’s Name 6

Affiliation,

Address line 1,

Address line 2.

**ABSTRACT (Arial Black, Caps, 12)**

This document demonstrates the format requirements for technical report submitted to the Robocon Malaysia 2019. All authors are encouraged to read this document before preparation of your report. Use this document as a template if you are using Microsoft Word 6.0 or later. Otherwise, use this document as an instruction set. The abstract **MUST** be written in English language even if the rest of the report is in Bahasa Malaysia. Define all symbols used in the abstract. Do not cite references in the abstract. The abstract summarizes the report using not more than 300 words in a single paragraph. The purpose of an abstract is so that a reader can quickly get an idea of the main points and contributions of the work.

1. **INTRODUCTION** (Arial Black, Caps, 12)

As with any writing, one of the first questions that must be asked in the planning process is "Who is the target reader?" The reader is normally independent and was not involved in the initiation or executing of the work being reported. The author must therefore ensure that sufficient background and detail is provided.

Be sure to define clearly the purpose of the report, i.e. the problem that was examined, the specific objectives of the work and the motivation for the work.

1. **ARRANGEMENTS/CONTENTS**

Guideline for technical report writing. Your writings must include but not limited to this proposed guideline. The main body text should be divided into chapters as follows,

1. Introduction
2. Detailed design
	1. Mechanical design
* Authors may discussed about locomotion, arms and legs extremities, actuators with its specification and design specifications (dimensions, mass, payload capacity, DOF, etc.).
	1. Electronic design
* Distribution of sensors and architecture of the processing units within the robots
	1. Software design
* Provide flowchart of the written program/code
1. Presentation of Data/Simulation/Testing
2. Conclusions, Limitations and Recommendations
3. Acknowledgments
4. References
5. **FORMAT AND LAYOUT** (Arial Black, Caps, 12)

Use font’s settings with Times New Roman and size 12 for paragraph texts. Indents and spacing should be 6.0pt before, 1.5 spacing and indentation of 0.5cm for the first sentence of a new paragraph. Paper length of the final version MUST be between 5 to 10 pages, *including* the bibliography. The paper is set to A4 (21cm x 29.7cm) and the margins should be set to Top (2.54cm), Inside (2.54cm), Outside (2.54c), Bottom (3.0cm) and Gutter (0.5cm) with mirror margins applied to the whole documents. All materials must fit within these margin requirements (including table, figure, graph, etc.). Reports must also be fully justified (i.e. have even left and right margins)

3.1 Figure, table and math (Arial Black, lower case, 12)

Place figure captions below the figures; place table titles above the tables. If your figure has two parts, include the labels “(a)” and “(b)” as part of the artwork. Please verify that the figures and tables you mention in the text actually exist. Be sure to label your axis properly if required and write the quantity name with the units.



Figure 1: The caption should be placed after the figure

Table 1: The caption should be placed before the table

|  |  |  |  |
| --- | --- | --- | --- |
| **Method** | **Parameter 1** | **Parameter 2** | **Parameter 3** |
| Our | 1.0 | 1.0 | 1.0 |
| Yours | 2.0 | 2.0 | 2.0 |
| Theirs | 3.0 | 3.0 | 3.0 |

* 1. Units and Equations

International system unit (SI) shall be used. Equation number should be enclosed in parentheses on the right hand margin. They should be cited in the text, for example, Eq. (1) or Eqs.(1)-(3). Equation starts from left.

$x=Ax+Bu$ (1)

$\dot{y}=Cx+Du$ (2)

* 1. Citations

When citing a multi-author paper, you may save space by using “*et alia*”, shortened to “et *al.*” (not “*et. al.*” as “et” is a complete word.). However, use it only when there are three or more authors.

Thus, the following is correct: “ Remembrall has been trendy lately. It was introduced by Weasley [1], and subsequently developed by Vector and Severus-Snape [2], and Nymphadora et *al.* [3].”

This is incorrect: “... subsequently developed by Vector et *al.* [2] ...” because reference [2] has just two authors.

List and number all bibliographical references in 11-point Times, single-spaced, at the end of your paper. When referenced in the text, enclose the citation number in square brackets, for example [4].

References

[1] A. Weasley. Rememberall. *Journal of Rem*, 12(1):234–778, 2002.

[2] A. Vector and H.P. Severus-Snape. Rememberall revisited. *Journal of Rem*, 13 (1):234–778, 2003.

[3] A. Nymphadora, A. Hermione, and A. Hagrid. Does Rememberall Really Exists? *Journal of Rem*, 14(1):234–778, 2004.

[5] Authors. Rememberall tutorial, 2019. Supplied as additional material.

[6] A. D. Malfoy. What’s wrong with these equations? *Physics Today*, October 2018. http://www.whtvr.org/doc/slyth.pdf.