**Guidelines for Journal Format, Title in Bold Font Size 14 Times New Roman**

Author name1,\*, Author name1 and Author name2

1School of Mechanical Engineering, Faculty of Engineering

Universiti Teknologi Malaysia

81310 UTM Johor Bahru

Johor, Malaysia

# ABSTRACT

*An abstract is an important overall summary of the paper. It should be written in italic using Times New Roman (TNR) and font size, 11 pt. As a guide, it should comprise of about 200 words and be as concise and precise as possible. The layout for this section should be justified/aligned at both left and right margins. The abstract should not only describe the rationale, aim and scope of paper but also provides a glimpse of the methodology and important results/outcomes of the undertaken research/study. Citation should not be given at all in this section.*

**Keywords**: *Not more than five (5) keywords, in italic, each separated with a comma*

**1.0 INTRODUCTION**

As a useful guide, this template in Microsoft Word should be directly and exactly used as it is, i.e., may use *copy/cut and paste* format. For every main section header (all capitalized letters with a section number and tabbed at 1 cm), apply a suppressed two-line spacing (twice enter) before and a single line spacing after it. The introduction shall describe the background, literature review and rationale of the proposed study. The first sentence in each paragraph should not be indented, i.e., 0 cm. The main text of the manuscript must begin with an introduction and end with a conclusion. It should generally be written in good and acceptable UK/US English consistently on an A4 size paper using font type, TNR and font size, 11 pt. The margins of the article should be 2.54 cm from top, 3.15 cm bottom, 4.45 cm left and 2.54 cm right. Generally, the main text should be fully justified/aligned and there should be a *single* line spacing and no *before or after* spacing throughout.

The first sentence in the following paragraph should be indented at 0.5 cm. No spaces are to be left between the paragraphs. Lines of text should cover the entire page length. Do not begin a new section directly at the bottom of a page as it is preferable to transfer the heading to the top of next page.

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\*Corresponding email: aaahmad@fkm.utm.my

The references should be cited consecutively using numbered bracket, for instance as described by Mailah *et al*. [1]. All the cited references should be listed at the end of the paper and must match with the appropriate and sufficient description of the citations in the main text [2-4].

**2.0 TABLES AND FIGURES**

Tables and figures should be arranged logically and sequentially numbered throughout the text and they should be first mentioned in the text on the same page before they are actually presented.

The captions should be as brief as possible but are sufficiently/accurately described. For the table, the caption should be placed at the top center of the table while for the figure, it should be placed below it, also at the center.

**2.1 Tables**

The first sentence in each sub-section should be written in bold, numbered sequentially, should not be indented and only the first letter of the word is capitalized. All tables should be kept simple and precise and must be referred to in the text. Tables should be presented in the form as shown in Tables 1 and 2 with a single line spacing before and after them. The table should be constructed to show the horizontal lines (1 pt. line width) without any vertical lines. The first row of the table describing the topics should be written in bold, TNR, 10 pt. while the contents (including texts and numerical figures) in regular, TNR, 9 pt. The table caption should be expressed in TNR, 10 pt. as shown in Tables 1 and 2.

**Table 1**: Quadcopter physical and motor parameters

|  |  |  |
| --- | --- | --- |
| **Description** | **Unit** | **Value** |
| Quadcopter mass, *m* | kg | 1.4 |
| Distance from center of mass to each motor, *l* | m | 0.56 |
| Thickness of quadcopter's arms for drawing purposes, *t* | m | 0.02 |
| Radius of propeller, *rad* | m | 0.1 |
| Drag torque coefficient, *K*D | kgm2 | 1.3858e-6 |
| Translational drag force coefficient, [*K*Dx, *K*Dy, *K*Dz] | kg/s | [0.16481, 0.31892, 1.1e-6] |
| Moment of inertia about X axis, [*J*x, *J*y, *J*z] | kgm2 | [0.05, 0.05, 0.24] |
| Gravity, *g* | m/s2 | 9.81 |
| Thrust force coefficient, *K*T | kgm | 1.3328e-5 |
| Moment of inertia of the rotor, *J*r (or *J*p)  | kgm2 | 0.013 |
| Motor speeds, lower & upper limits | rad/s | 0 and 925 |

**Table 2**: Summary of the simulation results for flight paths A and B with no disturbances

|  |  |  |
| --- | --- | --- |
| **Flight Path** | **Disturbance Type** | **Results** |
| A | None | Both controllers show no significant differences in Z and Yaw responses except for a very little difference in the yaw position (*ψ*) for flight path A (refer to Figure 5) |
| B | None |

The next paragraph should be indented at 0.5 cm and a single line spacing should be given after the table.

**2.2 Figures and Graphics**

All figures submitted should be of high quality and presented in black and white or color prints with or without border. Explanations and lengthy description should be placed in the text rather than within the figures, i.e., the captions should be short and precise. All figures/illustrations/graphics should be formatted as ‘In line with text’ with no text wrappings.

**Figure 1**: A short caption of the figure should be centered using TNR, 10 pt. font size

All illustrations and photographs must be numbered consecutively as they appear in the text and accompanied with appropriate captions below them. All illustrations should be clearly displayed by placing a single line spacing above and below them.

**2.3 Equations, Units and Acronyms**

Equations must be type written and special symbols must be identified properly. A single line spacing should be placed before and after the equation. The special symbols related to the parameters/variables used should be clearly defined where they first appear or arranged alphabetically at the end of the paper in a section known as ‘NOMENCLATURE’ (if any) and should be placed before the ‘REFERENCES’. This also applies to any related important information to be supplemented in the ‘APPENDIX’.

Mathematical expression such as in Equation (1) should be aligned approximately with the subsection title and the equation number aligned to the right. All variables/parameters/symbols must be generally presented in italic with super or sub-scripts written in regular form (not italicized) as shown in Equation (1). Wherever possible, all symbols and simple equations should be written normally in the WORD window using the ‘Insert Symbol’ menu, e.g., use *πr*2 = *A* from the menu and/or typical word editor and not $πr^{2}=A$, from the ‘Insert Equation’ menu.

 (1)

All units should be written in International System of Units (SI). Ensure that there is a space between the numerical value and unit, e.g., 12 cm (except for certain cases like 20oC and 12%). Acronym should be spelled out first in full before it can be used later in the text such as the Times New Roman (TNR).

# 3.0 CONCLUSION

It should be brief and clearly summarizes the main outcomes/results of the undertaken study/research. It may include a number of recommendations for future works.

# ACKNOWLEDGMENTS

A brief acknowledgment that is attributed to those supporting the research work may be included and presented in this section.

**REFERENCES**

1. The general formatting style is: TNR, 10 pt., *Left indentation*: 0.63 cm and *Hanging*: 0.63 cm with *single line* spacing but no *before or after* spacing. All the names of the authors must be presented to give due credence and recognition for their contrbution. Hence, avoid writing ‘1st Author *et al*.’ here. The formatting styles for citations related to journals, books, theses, proceedings, book chapters, internet websites, etc. are given as follows:

*Journals:*

2. Praveen V. and Pillai A.S., 2016. Modeling and Simulation of Quadcopter using PID Controller, *International Journal of Control Theory and Applications*, 9(15): 7151–7158.

3. Shekhar R.C., Kearney M. and Shames I., 2015. Robust Model Predictive Control of Unmanned Aerial Vehicles Using Waysets, *J. Guid. Control Dyn*., 38(10): 1898–1907.

*Books:*

4. Allen H.G.,1969. *Analysis and Design of Structural Sandwich Panels*, Pergamon Press, Oxford, UK.

*Theses:*

5. Martinez V.M., 2007. *Modelling of the Flight Dynamics of A Quadrotor Helicopter*, Master of Science Thesis, Department of Aerospace Sciences, Cranfield University, UK.

6. Clark P.G., 2011. *Synthesis of Interlocked Molecules by Olefin Metathesis*, PhD Thesis, California Institute of Technology, California, USA.

*Proceedings of Conferences/Symposiums:*

7. Huang H., Hoffman G.M., Waslander S.L. and Tomlin C.J., 2009. Aerodynamics and Control of Autonomous Quadrotor Helicopters in Aggressive Maneuvering, *IEEE International Conference on Robotics and Automation*, Kobe, Japan.

8. Alias A.,1998. Experimental Results and Techniques on the Crush Behavior, *Proceedings of The 3rd International Conference on Impact Engineering*, Singapore, 379-384.

*Book Chapters:*

9. Mailah M.**,** Tang H.H., Jalil M.K.A., 2006. Virtual Wheeled Mobile Robot Simulator with Integrated Motion Planning and Active Force Control, in Bojan Lalic(Ed.), *Advanced Technologies, Research – Development – Application*, 615-640, Pro Literatur Verlag, Germany.

*Websites:*

10. *Guide to Driving in Malaysia - Drive Safe in Malaysia*. https://www.rhinocarhire.com/Drive-Smart-Blog/Drive-Smart-Malaysia.aspx, [Accessed: 31 Jul 2018].

11. Clark P.G., 2011. *Synthesis of Interlocked Molecules by Olefin Metathesis*, PhD Thesis, California Institute of Technology, California, USA, http://thesis.library.caltech.edu/5981/1/Paul\_Clark\_PhD\_Thesis\_\_8-10-2010.pdf, [Accessed: 31 January 2012].