

# Stabilization of a Quadcopter

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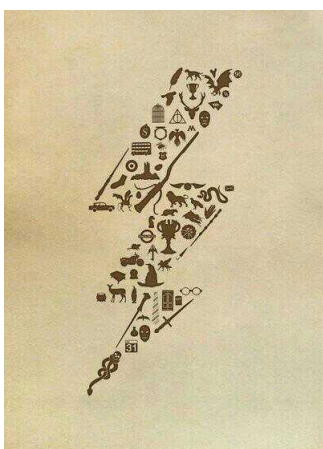
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**Abstract**—The abstract goes here.

## I. INTRODUCTION

This demo file is intended to serve as a “starter file” for IEEE conference papers produced under L<sup>A</sup>T<sub>E</sub>X using IEEE-tran.cls version 1.8b and later. I wish you the best of success.



**Figure 1:** Location of the center of mass, where  $\theta_1 = 0,043$  rad and  $\theta_2 = 0,078$  rad.

Characteristics	Value [Unit]
Nominal output current	5 [A]
Peak current (<20 s)	15 [A]
Current control PWM frequency	53,6 [kHz]
Sample Rate of PI current controller	53,6 [kHz]

**Table I:** Important parameters of the motor control board.

$$\mathbf{J}_F \ddot{\boldsymbol{\theta}}_F = -\mathbf{B}_F \dot{\boldsymbol{\theta}}_F + \mathbf{l}_F \times (\mathbf{m}_F \cdot \mathbf{g}) + \mathbf{l}_w \times \mathbf{F} - \boldsymbol{\tau}_m + \mathbf{B}_w \dot{\boldsymbol{\theta}}_w \quad [\text{N} \cdot \text{m}] \quad (1)$$

$$\begin{aligned} \tau_m[n] = & -8,314 \cdot e_\theta[n] + 7,422 \cdot e_\theta[n-1] + 8,3023 \cdot e_\theta[n-2] \\ & -7,434 \cdot e_\theta[n-3] + 1,382 \cdot \tau_m[n-1] - 0,3415 \cdot \tau_m[n-2] \\ & -0,001\,638 \cdot \tau_m[n-3] \end{aligned} \quad [\text{N} \cdot \text{m}] \quad (2)$$

## A. Subsection Heading Here

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## II. MODEL

## III. DISCUSSION

The conclusion goes here.

## ACKNOWLEDGMENTS

The authors would like to thank...

## REFERENCES

- [1] H. Kopka and P. W. Daly, *A Guide to L<sup>A</sup>T<sub>E</sub>X*, 3rd ed. Harlow, England: Addison-Wesley, 1999.