### Assignment 5 TTK4190

# Marine Control Systems: Analysis and Design

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### Abstract

Abstract goes here. Remember to make it good.

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# Abbreviations

Abbrev.	Abbreviation
Etc.	Etcetera
E.g.	For example (Lat. exempli gratia)
I.e.	That is to say (Lat. $id \ est$ )
GC	Guidance and Control
TA	Teaching Assistant

### Introduction

### Using the Template

To use this template, you need memoir. You can find it at CTAN (The Comprehensive  $T_{\rm EX}$  Archive Network).

The memoir manual is very good, both at explaining how to use the memoir class, and general rules of typography.

### Not Using the Template

You do not have to use the template. If you are not using it, use this document as en example of how the final report *can* (but not *must*) look.

You are also free to modify the template as you see fit.

## Historical Development of Marine Control Systems

This chapter contains dummy text, and also shows what to do if the chapter name is a bit too long. In additions, it contains example figures, example tables and example citations.

#### 1.1 A Section

The following is a quotation. Writing it like this is sometimes useful. For longer stuff you can use \quotation environment for longer, multi-paragraph quotes.

Cuius rei demonstrationem mirabilem sane detexi. Hanc marginis exiguitas non caperet.[MS93]

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#### Task 1.1.1

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More text in the task. The next task is Task 1.1.2.

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#### A Subsection

#### Task 1.1.2

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$$M\ddot{\xi} = \sum_{\alpha=1}^{N} f_{\alpha}$$

$$\mathbf{M}\ddot{\xi} = \sum_{\alpha=1}^{N} \mathbf{f}_{\alpha}$$

$$(1.1)$$

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Figure 1.1: An example figure.

Figure 1.2: Another example figure with too long caption for the List of Figures, also showing how to make subfigures.

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Alpha	Beta	Gamma
Delta	Epsilon	Zeta
Eta	Theta	Iota

Table 1.1: Table of Greek

Alef	Bet	Gimel
Dalet	Не	Vav
Zayin	Het	Tet

Table 1.2: Table of Hebrew

# Marine Vessel Modeling

# **Autopilots and Path Following**

# Dynamic Positioning Systems

### 5 Conclusions

#### 5.1 A Section

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### References

- [Bro83] R. W. Brockett. Asymptotic stability and feedback stabilization, pages 181–191. Birkhäuser, 1983.
- [Maz03] F. Mazenc. Strict lyapunov functions for time-varying systems. Automatica, 39:349-353, 2003.
- [MS93] R. M. Murray and S. S. Sastry. Nonholonomic motion planning: steering using sinusoids. IEEE Transactions on Automatic Control, 38:700–716, 1993.

Appendices

### Appendix A

# **Moderately Important Stuff**

### A.1 About Appendices

If you have many appendices, do it like this: A page signifying the start of the appendices saying "Appendices", then the appendices numbered  $A, B, C, \ldots$ 

If you only have one appendix, do not have a page saying "Appendices". Have just one unnumbered chapter with title "Appendix", or "Appendix: Name of Appendix".

# Appendix B

More Moderately Important Stuff

# Appendix: Slightly Important Stuff

### A Section

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