MANIPULATION OF UNCOOPERATIVE OBJECTS IN ZERO-GRAVITY WITH MODULAR SELF-RECONFIGURABLE ROBOT

by

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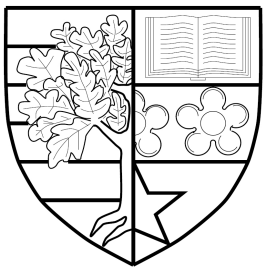

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Abstract

PhD theme definition: mass distribution change as a control mechanism using a robot that changes its shape i.e. a self-reconfigurable robot in the specific context of attitude and rotational motion maintenance.

Acknowledgements

write ...

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Chapter 1

Introduction

the genral theme of this thesis is to explore how changes in mass distribution can be performed to minimise the duisturbanc eto the rotational motion of a free floating object and further whether it would be possible to use as a more active control method for the rotational motion

Write..

1.1 Section

[2]

1.1.1 Subsection

1.1.1.1 Subsubsection

Chapter 2

Background

Write.. Glasgow Haskell Compiler (GHC).

Write..GHC.

2.1 Section

Write.. Processing Element (PE).

Write.. PEs.

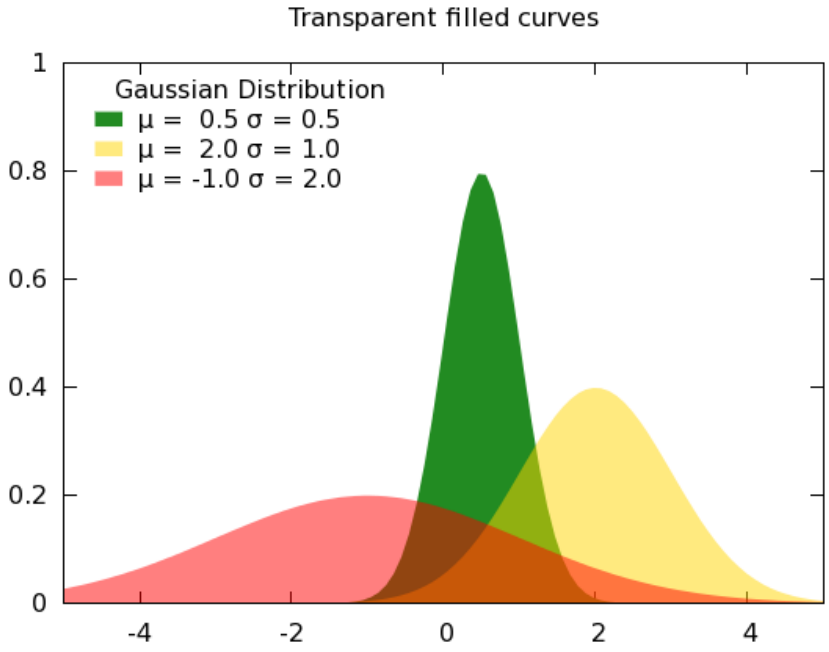

Figure 2.1: Figure Caption.

[3, 1]

2.1.1 Subsection

Case	Method#1	Method#2	Method#3
1	50	837	970
2	47	877	230
3	31	25	415
4	35	144	2356
5	45	300	556

Table 2.1: Table Caption

2.1.1.1 Subsubsection

Chapter 3

Stability study

3.1 Introduction: What Proof of Concept

with the prurpose of designing mass changes as control method one needs to establish the effect of changes of mass distributioon on a rotating free floating rotational motion and determine if there are and if so under what kind of conditions the motion of a mass at the surface of a free floating objects will imact its rotational motions delpoyment of structure on frre floating object

define the stability of the rotational motion of the obejct???

System definition and model: The system is composed of an undeformable rotating object and a modular robot made out of identical spherical modules. The robots moves and deploys itself at the surface of the object by maintianing contact at all time. As the rotational motion is the only focus of this study, the system is considered to be isolated. The best way to model is to use

Write..GHC Write..GHC.

3.2 System modelling

Write.. PE.

Write.. PEs.

3.3 Hamiltonian Lagrange formulation

Write.. PE.

Write.. PEs.

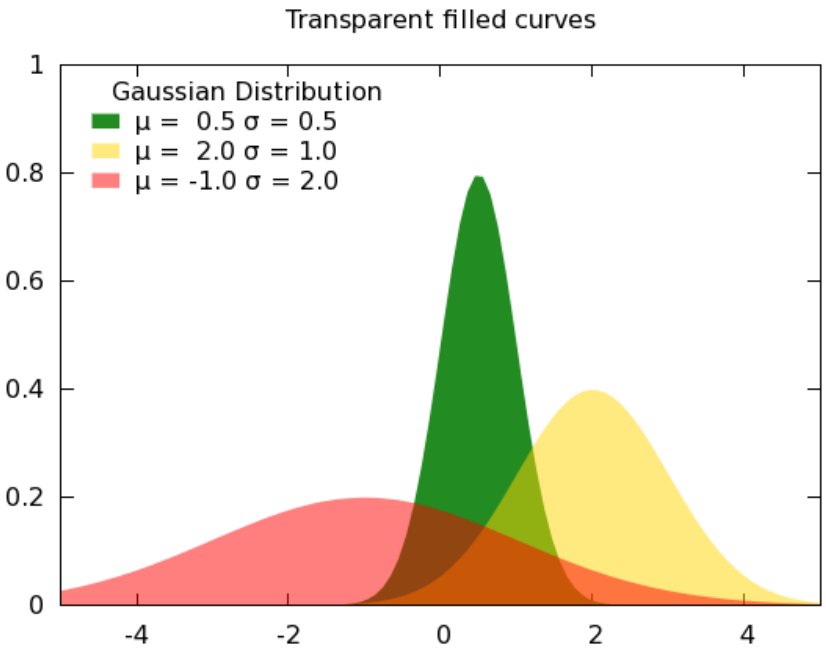

Figure 3.1: Figure Caption.

[3, 1]

3.3.1 Subsection

Case	Method#1	Method#2	Method#3
1	50	837	970
2	47	877	230
3	31	25	415
4	35	144	2356
5	45	300	556

Table 3.1: Table Caption

3.3.1.1 Subsubsection

Chapter 4

Design

Write..

4.1 Section

According to [2] ...

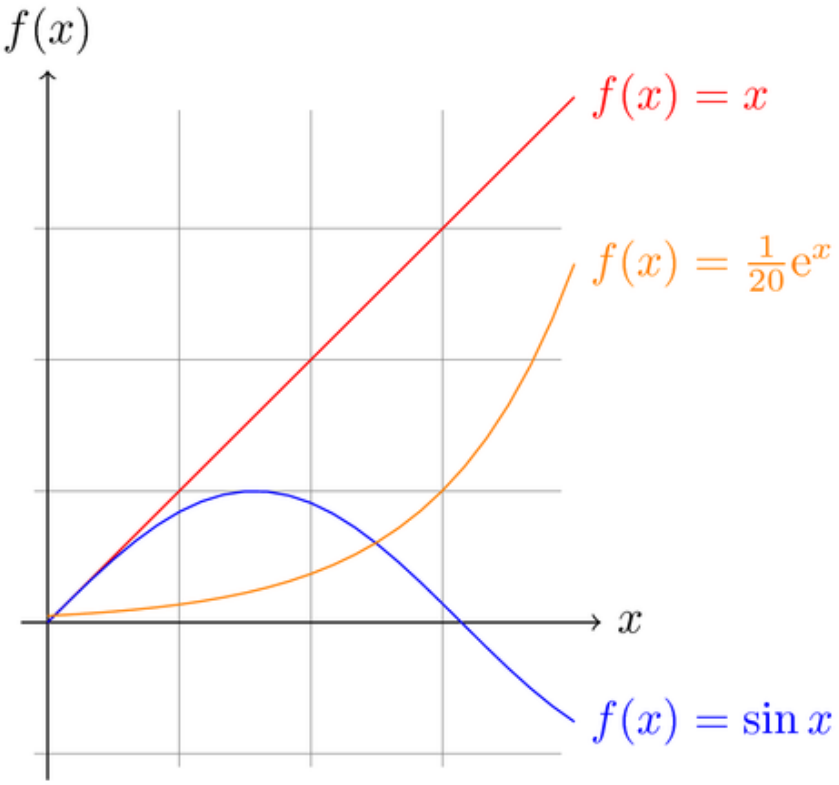

Figure 4.1: Figure Caption.

4.1.1 Subsection

Audio Name	Sum of Extracted Bits						
Police	5	-1	5	5	-7	-5	3
Midnight	7	-3	5	3	-1	-3	5
News	9	-3	7	9	-5	-1	9

Table 4.1: Table Caption

4.1.1.1 Subsubsection

Chapter 5

Conclusion and Future Work

Appendix A

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Bibliography

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[3] P. W. Trinder, K. Hammond, J. S. Mattson Jr., A. S. Partridge, and S. L. Peyton Jones. GUM: a Portable Parallel Implementation of Haskell. In *PLDI '96, Philadelphia, USA*, pages 78–88. ACM Press, 1996.