

Faculty of Natural and  
Mathematical Sciences  
Missing Department



Missing Module Code  
Missing Submission title

Name: John Doe  
Student Number: Missing Studentnumber  
Degree Programme: Missing Program  
Project Title: Super duper test title  
Supervisor: Missing supervisor  
Word Count: Missing wordcount

#### Plagiarism Statement

All work submitted as part of the requirements for any examination or assessment must be expressed in your own words and incorporates your own ideas and judgements. Plagiarism is the taking and using of another person's thoughts, words, judgements, ideas, etc., as your own without any indication that they are those of another person.

Plagiarism is a serious examination offence. An allegation of plagiarism can result in action being taken under the *B3 Misconduct Regulations*.

I acknowledge that I have read and understood the above information and that the work I am submitting is my own.

Signature:

Date: April 10, 2020

Missing Department  
King's College London  
WC2R 2LS London  
United Kingdom

## Super duper test title

---

**John Doe**

Student Number: Missing Studentnumber

Course: Missing Program

**Supervisor:** Missing supervisor



Thesis submitted as part of the requirements for the award of the MSc in Web  
Intelligence.

7CCSMPRJ - MSc Individual Project - 2016

DRAFT

## Abstract

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet.

# Contents

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>Introduction</b>                                 | <b>1</b>  |
| 1.1      | Project Aims, Objectives and Introduction . . . . . | 1         |
| 1.2      | Background and Literature Survey . . . . .          | 1         |
| <b>2</b> | <b>Background Theories</b>                          | <b>2</b>  |
| <b>3</b> | <b>Main Result</b>                                  | <b>3</b>  |
| 3.1      | Maths . . . . .                                     | 3         |
| 3.2      | Glossary and acronyms . . . . .                     | 3         |
| 3.3      | Figures . . . . .                                   | 3         |
| 3.4      | Table . . . . .                                     | 4         |
| <b>4</b> | <b>Model calibration</b>                            | <b>5</b>  |
| 4.1      | What is calibration? . . . . .                      | 5         |
| 4.2      | Numerical methods for calibration . . . . .         | 5         |
| <b>5</b> | <b>Conclusion</b>                                   | <b>6</b>  |
| <b>A</b> | <b>Review of stochastic calculus</b>                | <b>10</b> |
| A.1      | Riemann integration . . . . .                       | 10        |
| A.2      | The Itô integral . . . . .                          | 10        |

**List of Figures**

|   |   |   |
|---|---|---|
| 1 | This is the caption for the figure. . . . .                           | 3 |
| 2 | This is the caption for the figure which is not even present. . . . . | 4 |
| 3 | Another caption . . . . .   | 4 |

**List of Tables**

|   |                                  |   |
|---|----------------------------------|---|
| 1 | Random data for a table. . . . . | 4 |
|---|----------------------------------|---|

## Acknowledgements

I would like to thank my supervisor.....

# 1 Introduction

## 1.1 Project Aims, Objectives and Introduction

It gives a basic background of the work. The problems and project objectives should be clearly stated. The techniques and approaches used to deal with the problem should be stated with reasons, and the contributions and main results achieved should be stated clearly. The structure of the report can be described briefly at the end

## 1.2 Background and Literature Survey

It gives an overall picture about the work with a clear review of the relevant literature. The background of the project should be given. What have been done to deal with the problem should be stated clearly. The pros and cons of various existing algorithms and approaches should be stated as well. Differences between your proposed method and the existing ones should be briefly described.

The following links may help on the literature review: IEEE Xplore digital library: a resource for accessing IEEE published scientific and technical publications (You must be with King's network to get access to the digital library) ScienceDirect.com: an electronic database offering journal papers not published by IEEE (You must be with King's network to get access to the database)



## 2 Background Theories

The background theories supporting the work should be given in this section.

DRAFT

### 3 Main Result

The chapter reports the contribution of your work. For example, it could contain the following sub-sections to summarise the contribution of the project: Theoretical Development, Analysis and Design, Implementation and Experimental Work, Results, Observation and Discussion.

#### 3.1 Maths

$$\frac{dS_t}{S_t} = rdt + \sigma dW_t, \quad S_0 > 0, \quad (3.1)$$

The equation  $\sigma = ma$  follows easily [1].

#### 3.2 Glossary and acronyms

Unix operating systems are better then Windows because they support out of the box [4].

RefMissing:  
A ref is  
missing here

#### 3.3 Figures

Here is an example [3] of how to insert a picture:

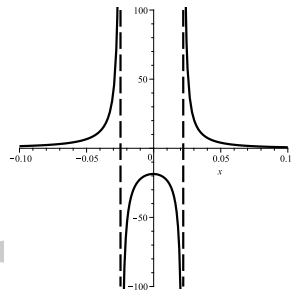


Figure 1: This is the caption for the figure.

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet.

or two side-by-side pictures:

This is a  
small Todo,  
please take  
care!

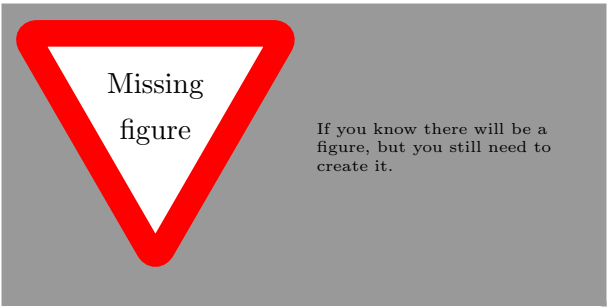


Figure 2: This is the caption for the figure which is not even present.

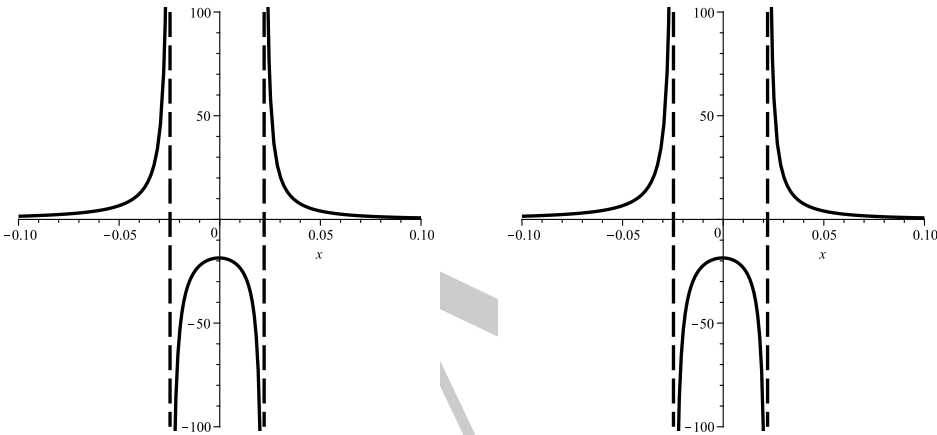


Figure 3: Another caption

3.4Table

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet.

|           |           |       |
|-----------|-----------|-------|
| Something | Someother | Thing |
| Seems     | to be     | good  |

Explain:  
This needs  
further ex-  
planation

Table 1: Random data for a table.

Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet.

## 4 Model calibration

### 4.1 What is calibration?

Here is an example of a matrix [2] in  $A \in \mathcal{M}_n(\mathbb{R})$ :

$$A = \begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & \ddots & \ddots & \vdots \\ \vdots & \ddots & \ddots & \vdots \\ a_{n1} & \dots & \dots & a_{nn} \end{pmatrix}$$

### 4.2 Numerical methods for calibration

...

## 5 Conclusion

It is a chapter to sum up the main points of the work, such as the aims and objectives of the project, the contributions and results you have achieved. Future plan and development can be mentioned in this section.

DRAFT

## References

- [1] J. Doe. “The Title”. PhD thesis. University of Mars, 2011.
- [2] Fermentas Inc. *Phage Lambda: description & restriction map*. Nov. 2008. URL: <http://www.fermentas.com/techinfo/nucleicacids/maplambda.htm>.
- [3] I.M. Johnstone and B.W. Silverman. “EbayesThresh: R programs for Empirical Bayes Thresholding”. In: *Journal of Statistical Software* 12.8 (2005), pp. 1–38.
- [4] Ian M. Johnstone. *Gaussian estimation: Sequence and multiresolution models*. 2011.

## Declaration

I declare that this thesis is the solely effort of the author. I did not use any other sources and references than the listed ones. I have marked all contained direct or indirect statements from other sources as such.

Neither this work nor significant parts of it were part of another review process. I did not publish this work partially or completely yet. The electronic copy is consistent with all submitted copies.

Signature and date:



## A Review of stochastic calculus

### A.1 Riemann integration

### A.2 The Itô integral