

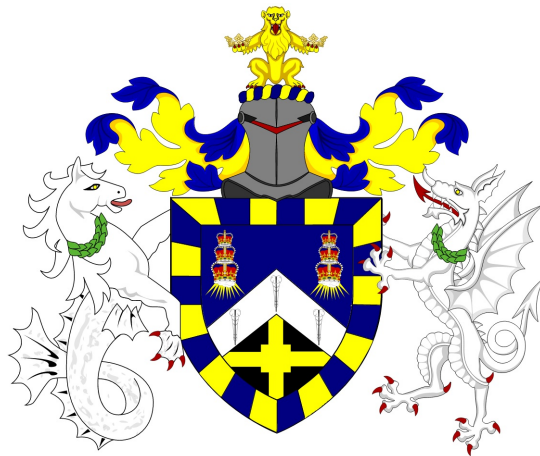
Financial Mathematics MSc Dissertation MTHM038, 2025/27

Tittle of the Thesis

With special emphasis on examples

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School of Mathematical Sciences
and School of Economics and Finance
Queen Mary University of London

Declaration of original work

This declaration is made on January 30, 2026.

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This work is dedicated to ABC XYZ

Acknowledgements

Example text

Abstract

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Chapter 1

Introduction

This note presents a conjecture stemming from our investigations in the generation of sigmoid tensor categories of Picard numbers of tori in Banach algebras. Example text

1.1 Motivation for this work

In the works of Petri ([P99, Theorem 2.3]) we find the following statement

Theorem 1.1.1 ([P99, Theorem 2.3], see also [BS, pg. 45]). *The Gramm matrix for E_8 is:*

$$\begin{pmatrix} 2 & -1 & 0 & 0 & 0 & 0 & 0 & 0 \\ -1 & 2 & -1 & 0 & 0 & 0 & 0 & 0 \\ 0 & -1 & 2 & -1 & 0 & 0 & 0 & -1 \\ 0 & 0 & -1 & 2 & -1 & 0 & 0 & 0 \\ 0 & 0 & 0 & -1 & 2 & -1 & 0 & 0 \\ 0 & 0 & 0 & 0 & -1 & 2 & -1 & 0 \\ 0 & 0 & 0 & 0 & 0 & -1 & 2 & 0 \\ 0 & 0 & -1 & 0 & 0 & 0 & 0 & 2 \end{pmatrix}.$$

1.1.1 The problem of exponential extensions

Example text

1.1.2 The approach of Junderstein

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Chapter 2

Eulerian topological string motives

Example text

2.1 Definitions

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2.1.1 Tate's theorem

Preliminary considerations Example text

Motivic financial algebroids Example text

2.1.2 Grothendieck topologies

Example text

2.2 Calculation of the invariant cycles

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2.2.1 Fontaine's theorem

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Chapter 3

Conclusions

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Appendix A

Implementation of the BarrierOptionCVA class

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Appendix B

Additional details on the Gundermanian determinant

Example text

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