UNIVERSITÉ DU LUXEMBOURG

PhD-No PhD-FSTM-20xx-xxx
The Faculty of Science, Technology and Medicine

DISSERTATION

Presented on xx/xx/20xx in Luxembourg

to obtain the degree of

DOCTEUR DE L'UNIVERSITÉ DU LUXEMBOURG

EN PHYSIQUE

by

First name LAST NAME

Born on xx xxxx xxxx in City (Country)

THESIS TITLE

Dissertation defense committee

Dr. First Name Last name, supervisor
Professor, University of Luxembourg

Dr. First Name Last Name, Chairman
Professor, University of Luxembourg

Dr. First Name Last Name, Vice-Chairman
Professor, university

Dr. First Name Last name
Professor, university

Dr. First Name Last name
Professor, university

Optional

Abstract

Abstract here

Keywords: quantum Monte Carlo

Acknowledgments

Acknowledgments

Preface

Note on publications

This thesis is partly based on the previously published articles:

[1] J. Doe, “Quantum Monte Carlo for dummies" *Journal.* **1**, 1, 2023.

The author’s contribution to each paper is given at the beginning of a chapter or section where the main results are included.

Other publications:

[1] J. Doe, “Quantum Monte Carlo for dummies" *Journal.* **1**, 1, 2023.

Contents

List of Figures

List of Tables

List of Abbreviations

QMC Quantum Monte Carlo

List of Symbols and Notation

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m	Mass
e^+	Positron
Ps	Positronium

Chapter 1
Introduction

Introdcution

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Example of an acronym, Quantum Monte Carlo (QMC) for positrons with a reference [1]

Chapter 2

Theoretical Background

Chapter 2

Chapter 3

Title 3

Parts of this chapter have been published in this or similar form in:

J. Doe “Quantum Monte Carlo for dummies" *Journal* **1**, 1, 2023,

and have been produced in collaboration with the above authors.

Introduction

3.1 Methods

$$\hat{H}\Psi = E\Psi \tag{3.1}$$

3.2 Results

Solution of Eq. 3.1 of Section 3.1

3.3 conclusions

No conclusive results

Chapter 4

Summary and Outlook

Conclusions

Appendix A:

Table A1: Long caption

Item		
Animal	Description	Price
Gnat	per gram	13.65
	each	0.01
Gnu	stuffed	92.50
Emu	stuffed	33.33
Armadillo	frozen	8.99

Bibliography

[1] D. Bressanini. "The stability of e^+ $(H^-)_2$". *J. Phys. Chem* **154**, 224306 (2021).