



Technische Universität München
Fakultät für Physik
(Lehrstuhl, Leiter, Arbeitsgruppe etc.)

Michael L.
Please trans-
late this to
english.

Detecting Thermal Phase Transitions in a Trapped Ion Quantum Computer*

Bachelor Thesis
by

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in fulfillment of the requirements for the degree of
Bachelor of Science

Supervised by

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Topic: Quantum Many-Body Physics (Theory)

January 30, 2020

*October 10, 2020, Wir sollten uns nicht empören, dass andere die Wahrheit vorenthalten, wenn wir sie doch selbst so oft verschleiern. (please delete this immediately :P)

Michael L.
Please re-
move this
immediately.

Abstract

Was ist schlecht? – Alles, was aus
der Schwäche stammt.

(Friedrich Nietzsche)

L^AT_EX class [sty](#) (static) hypertext markup language ((s)html), [\(s\)html](#), (s)html plural

Michael L.
Was aber
die Leute
gemeinlich
das Schick-
sal nennen
sind meis-
tens nur
Ihre eigenen
dummen
Streiche. [1]

Contents

Abstract	i
1. Introduction	1
1.1. Sub-Int-1	1
1.1.1. Subsub-Int-1-1	1
1.1.2. Subsub-Int-1-2	1
1.2. Sub-Int-2	1
1.2.1. Subsub-Int-2-1	1
1.2.2. Subsub-Int-2-2	1
2. Theoretical Background	2
2.1. Sub-Int-1	2
2.1.1. Subsub-Int-1-1	2
2.1.2. Subsub-Int-1-2	2
2.2. Sub-Int-2	2
2.2.1. Subsub-Int-2-1	2
2.2.2. Subsub-Int-2-2	2
3. Computational Methods	3
4. Evaluation	4
5. Conclusion and Perspective	5
Appendix	6
Bibliography	9
Index	10
List of Abbreviations	11
List of Figures	12
List of Tables	13
List of Listings	14
List of Todos	15
Declaration of Authorship	16
Acknowledgments	17

Chapter 1.

Introduction

Was ist gut? – Alles, was das
Gefühl der Macht, den Willen zur
Macht, die Macht selbst im
Menschen erhöht.

(Friedrich Nietzsche)

Contents

- 1.1. Sub-Int-1 1
 - 1.1.1. Subsub-Int-1-1 1
 - 1.1.2. Subsub-Int-1-2 1
- 1.2. Sub-Int-2 1
 - 1.2.1. Subsub-Int-2-1 1
 - 1.2.2. Subsub-Int-2-2 1

- 1.1. Sub-Int-1
 - 1.1.1. Subsub-Int-1-1
 - 1.1.2. Subsub-Int-1-2
- 1.2. Sub-Int-2
 - 1.2.1. Subsub-Int-2-1
 - 1.2.2. Subsub-Int-2-2

Chapter 2.

Theoretical Background

Contents

- 2.1. Sub-Int-1 2
 - 2.1.1. Subsub-Int-1-1 2
 - 2.1.2. Subsub-Int-1-2 2
- 2.2. Sub-Int-2 2
 - 2.2.1. Subsub-Int-2-1 2
 - 2.2.2. Subsub-Int-2-2 2

Was ist Glück? – Das Gefühl davon, dass die Macht wächst, – dass ein Widerstand überwunden wird.

- 2.1. Sub-Int-1**
 - 2.1.1. Subsub-Int-1-1**
 - 2.1.2. Subsub-Int-1-2**
- 2.2. Sub-Int-2**
 - 2.2.1. Subsub-Int-2-1**
 - 2.2.2. Subsub-Int-2-2**

Chapter 3.

Computational Methods

Chapter 4.

Evaluation

Chapter 5.

Conclusion and Perspective

Appendix

A. Experimental Setup Details	7
B. Additional Measurement Data	8

Appendix A.

Experimental Setup Details

Appendix B.

Additional Measurement Data

Bibliography

- [1] Michael Labenbacher. *Erweiterung des T_EXbooks. Feineinstellungen*. VerlagX, 1984. ISBN: 3825856976. URL: www.labenbacher.at (visited on March 11, 1997) (cit. on p. [i](#)).

Index

Unterstrichene Zahlen (`idxnumber(i)`) verweisen auf die Definition, fett hervorgehobene (`idxnumber`) geben Seiten der Erklärung zum jeweiligen Stichwort wieder und normal gedruckte verweisen hingegen auf Seiten mit zusätzlichen Informationen (Numbers underlined point to the definition; numbers written in boldface refer to the pages where the corresponding entry is described; all others indicate the places where it is used.).

L	class..... <u>i</u>
	sty <u>i</u>
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L ^A T _E X.....	<u>i</u>

List of Abbreviations

S

S

(s)**html** (static) hypertext markup language.....[i](#)

List of Figures

List of Tables

List of Listings

List of Todos

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Missing acknowledgments.	17

Declaration of Authorship

I hereby declare this Bachelor's Thesis to be written exclusively by myself using the sources and facilities indicated. All direct or indirect sources used are specifically acknowledged as references at their point of use. This thesis was not presented to any other examination board before and has not been published previously.

Michael L.

La
Rouchefou-
cauld, Be-
trachtun-
gen oder
Moralische
Sentenzen
und Maxi-
men.



Labenbacher Michael

October 10, 2020

Acknowledgments

Es ist eine große Begabung, seine Begabung verbergen zu können.

Michael L.

Das Ge-
nie wohnt
nur eine
Etage höher
als der
Wahnsinn.