



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

*September 21, 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]

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Chapter 1.

Introduction

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

(Friedrich Nietzsche)

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Chapter 2.

Theoretical Background

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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

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Conclusion and Perspective

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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](#)).

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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>
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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

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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

September 21, 2020

Acknowledgments

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

Michael L.

Das Genie wohnt
nur eine
Etage höher
als der
Wahnsinn.