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Title in English

Master's thesis
in COMPUTATIONAL ENGINEERING

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Warsaw, May 2021

Abstract

Here an abstract will show up in some months to follow.

Keywords

quantum annealing, D-Wave

Thesis domain (Socrates-Erasmus subject area codes)

11.3 Informatyka

Subject classification

D. Software
D.127. Blabalgorithms
D.127.6. Numerical blabalysis

Tytuł pracy w języku polskim

Tytuł po polsku

Contents

Introduction

Chapter 1

Current state of Quantum Computing

1.1. Gate model

Some text about the gate model computers

1.1.1. Error correction

Some for subsection of error correction

1.2. Problems of practical QC - NISQ

Some text about NISQ

1.3. Quantum Annealing

Quantum annealing has some interesting properties. It is analog in nature and because the computation happens in a ground state it is unaffected by decoherence [2].

Chapter 2

What actually is Quantum Annealing

2.1. Thermal Annealing

2.2. Simulated Annealing

2.3. Quantum Annealing

Chapter 3

The problem

Chapter 4

Practical relization of The problem

Chapter 5

Conclusions and remarks

Chapter 6

Scratchbook

Ocean toolkit is the software suite currently used by DWave to solve computational problems. It consists of various submodules, each aimed at different stage of the process. The toolkit is freely available on Github [1].

Bibliography

[1] D-Wave Systems Inc.

[2] Catherine C. McGeoch. *Adiabatic quantum computation and quantum annealing: Theory and practice*, volume 5. Morgan & Claypool Publishers, 2014.