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**Title in English**

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## **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

<b>Introduction</b>	5
<b>1. Current state of Quantum Computing</b>	7
1.1. Gate model	7
1.1.1. Error correction	7
1.2. Problems of practical QC - NISQ	7
1.3. Quantum Annealing	7
<b>2. What actually is Quantum Annealing</b>	9
2.1. Thermal Annealing	9
2.2. Simulated Annealing	9
2.3. Quantum Annealing	9
<b>3. The problem</b>	11
<b>4. Practical relization of The problem</b>	13
<b>5. Conclusions and remarks</b>	15
<b>6. Scratchbook</b>	17



# 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 tool-kit is the software suite currently used by DWave to solve computational problems. It consists of various sub-modules, each aimed at different stage of the process. The tool-kit 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.