$$\frac{\partial}{\partial \theta} \operatorname{M} T(\xi) = \frac{\partial}{\partial \theta} \int_{\mathbb{R}_{n}}^{T} T(x) f(x, \theta) dx = \int_{\mathbb{R}_{n}}^{\theta} \frac{\partial}{\partial \theta} T(x) f(x, \theta) dx = \int_{\mathbb{R}_{n}}^{\theta} \frac{\partial}{\partial \theta} T(x) f(x, \theta) dx = \int_{\mathbb{R}_{n}}^{\theta} \frac{\partial}{\partial \theta} T(x) f(x, \theta) dx = \int_{\mathbb{R}_{n}}^{\theta} \int_{\mathbb{R}_{n}}^{\mathbb{R}_{n}} f(x, \theta) dx = \int_{\mathbb{R}_{n}}^$$

Project 3

## FYS3150 - Computational physics

# Quantum dots

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#### Abstract

Here is a short summary of the project.

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#### 1 Introduction

Quantum mechanics is an exciting field.

## 2 Theory

Here is all the theory needed to understand the project.

#### 2.1 The numerical foundation

This is the section explaining the numerical theory upon which the project is built.

- 2.1.1 Monte Carlo methods
- 2.1.2 Importance sampling
- 2.1.3 Metropolis algorithm

#### 2.2 The physical system

This is the section explaining the physics of the system.

- 2.2.1 Quantum mechanics
- 2.2.2 Discretization
- 2.2.3 The virial theorem

#### 3 Method

This is the section explaining what has been done.

#### 3.1 Subsection

These will become apparent as the work boils down.

#### 4 Results and discussion

Section listing results and discussing them.

#### 4.1 Subsection

The same as the method section.

# 5 Conclusion