

# **SIMULATION OF DIFFUSION IN HETEROGENEOUS MEDIA**

by

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A dissertation submitted to the University of Ontario  
Institute of Technology in accordance with the  
requirements of the degree of Bachelor of Science  
(Hons) in the Faculty of Science.

March 20, 2016



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# ABSTRACT

This is a short example of an abstract.

# ACKNOWLEDGEMENTS

Thank some people that you like here.

# AUTHOR'S DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of the University of Ontario Institute of Technology. The work is original except where indicated by special reference in the text and no part of the dissertation has been submitted for any other degree. Any views expressed in the dissertation are those of the author and in no way represent those of the University of Ontario Institute of Technology. The thesis has not been presented to any other University for examination either in Canada or elsewhere.

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March 20, 2016

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# 1. INTRODUCTION

What was/is the purpose of this thesis? Why did we develop these computational simulations? Really, we need a goal!

In this thesis, a lattice Monte Carlo approach was used to simulate diffusion. Also used a finite difference method to simulate diffusion. Both problems were boundary-value problems.

We also performed an analysis: MSD, mean position, etc.?? Analysis is kind of empty!

## 1.1 Background

Overall overview to thesis? What kind of an overview? Or just a general background to some main concepts needed or used in this thesis? How does this compare with the abstract?

## 1.2 Diffusion

Say something general



### **1.3 Monte Carlo**

### **1.4 Finite Difference Solution of the Diffusion Equation**

This was done is 1D and 2D.

### **1.5 Simple Cell Model**

## 2. SIMULATIONS

### **3. RESULTS AND ANALYSIS**

## **4. CONCLUSION AND FUTURE WORK**

# REFERENCES

Navarro, J.F., Frenk, C.S., & White, S.D.M. 1995, MNRAS, 275, 720

## A. APPENDIX

This is just an example of an appendix.