

# ENPH 257 LAB REPORT

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## **Abstract**

hello world

# Chapter 1

## Introduction

1.1 Heat transfer: Conduction, convection, and radiation

1.2 The convection-diffusion equation

## Chapter 2

# Objective

# Chapter 3

## Method

### 3.1 Experimental setup

#### 3.1.1 Rod dimensions

#### 3.1.2 Thermocouple circuit

### 3.2 Calibration

### 3.3 Data aquisition

## Chapter 4

# Results

## Chapter 5

# Simulation and optimization

### 5.1 One-dimensional explicit-step simulation

#### 5.1.1 Finite difference equation

#### 5.1.2 Implementation

### 5.2 Optimization of one-dimensional simulation

### 5.3 High-level simulation

## Chapter 6

# Analysis



## Chapter 7

# Conclusion and Summary

## Appendix A

# Comparison of Finite Differencing Methods

A.1 Explicit method

A.2 Implicit method

A.3 Crank-Nicolson method