



# **FPT Algorithms – Incremental Dominating Set Solutions**

**Kai Wang**

**Master by Research**

**School of Engineering and IT  
Faculty of EHSE**

**Charles Darwin University  
Darwin**

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# ABSTRACT





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# **INTRODUCTION**

## **1.1 Motivation**

## **1.2 Contribution Overview**

## **1.3 Thesis Overview**





# PRELIMINARIES AND NOTATION

## 2.1 Set Theory

## 2.2 Graph Theory

## 2.3 Complexity Theory

### 2.3.1 Decision Problems

### 2.3.2 Growth Rate of Function

### 2.3.3 Fixed Parameter Tractability

### 2.3.4 W-Hierarchy

### 2.3.5 Kernelization

## 2.4 Reduction Rules

An improved *FPT* Algorithm for Vertex Cover

Crown Reduction Rule



## CONCLUSION



# APPENDIX A

## Source Code



# **BIBLIOGRAPHY**