



Author's Name

The title of the dissertation

TURKU CENTRE *for* COMPUTER SCIENCE

TUCS Dissertations

No ????, July 2015



The title of the dissertation

Author's Name

*To be presented, with the permission of the Faculty of ??? of the  
University of ???, for public criticism in Auditorium ??? on August 20,  
2004, at 12 noon.*

University of ???  
Department of ???  
Address of Department

2014

## Supervisors

Supervisor1  
Department of ???  
University of ???  
Address  
Country

Supervisor2  
Department of ???  
University of ???  
Address  
Country

## Reviewers

Reviewer1  
Department of ???  
University of ???  
Address  
Country

Reviewer2  
Department of ???  
University of ???  
Address  
Country

## Opponent

Opponent  
Department of ???  
University of ???  
Address  
Country

ISBN 9999-9999999  
ISSN 1239-1883

# Abstract

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed et dapibus turpis, id feugiat nibh. Curabitur hendrerit, massa vitae faucibus tincidunt, odio sapien dapibus velit, ut varius nisl ex vitae turpis. Pellentesque habitant morbi tristique senectus et netus et malesuada fames ac turpis egestas. Nullam molestie, purus at vulputate accumsan, urna lorem efficitur sem, ac elementum enim turpis id mi. Cras mollis pretium arcu. Mauris vulputate eros diam. Aliquam varius vulputate tellus, ac fermentum diam vestibulum sit amet. Maecenas tincidunt ex in arcu malesuada, eget fringilla sapien elementum. Donec blandit sit amet diam quis volutpat. Vivamus bibendum mattis nisl sit amet mattis. Nunc pulvinar mi convallis, facilisis augue nec, laoreet diam. Aliquam semper tortor quis metus volutpat, eget interdum nibh feugiat. Nullam a ipsum eget nisl consectetur pellentesque. Suspendisse nec auctor quam, nec fermentum justo. Quisque dictum posuere elit, ut hendrerit odio. Mauris non nisl ex.

In pulvinar congue ultricies. Fusce lobortis mattis mi at viverra. Proin rutrum convallis mollis. Proin enim elit, sagittis non nunc eget, elementum venenatis purus. Nam tristique felis at enim venenatis, commodo cursus felis facilisis. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Morbi id nisl mattis, sagittis risus id, laoreet odio. Curabitur sagittis elit ut malesuada consectetur. Nullam aliquet nibh eu elementum venenatis. Phasellus ac mattis diam. Duis tincidunt diam non dui finibus pulvinar. Fusce ut dolor dui. Fusce vel sem condimentum, pretium nulla id, congue lorem. In vitae massa odio.



# Acknowledgements

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Maecenas gravida porta tellus eu sodales. Duis ut nisl sed purus dignissim feugiat. Integer sollicitudin tristique purus nec fermentum. Donec pretium dictum nisl eu rutrum. Curabitur fringilla diam sit amet massa lobortis eleifend. Vestibulum vehicula vehicula sem, non aliquet lorem pharetra eget. Phasellus erat quam, molestie sed rutrum ut, volutpat quis turpis. Vestibulum blandit venenatis lacus, at egestas augue consectetur efficitur. Duis at leo neque. Vivamus maximus, urna sed tristique condimentum, purus lacus volutpat ex, sed pellentesque lorem elit eu nunc.

Praesent eget sem eget dui tempus pharetra a sed libero. Quisque quam magna, pulvinar et dapibus eu, sagittis sit amet magna. Sed id pretium metus. In a felis ante. Etiam porta molestie consequat. Suspendisse in tortor a ipsum ornare vulputate maximus a massa. Nunc at viverra lectus. Integer vestibulum justo sed congue pretium. Nulla ac ante sit amet elit convallis commodo. Duis in faucibus nibh. Aliquam consequat ultricies purus sed tempus.

City, month year  
Author Name





# List of original publications

- I Author, A., Coauthor, C., and Supervisor, S. (2015). Example Paper  
I. *Example Journal*, 15(6):100–101
- II Author, A., Coauthor, C., and Supervisor, S. (2008). Example Paper  
II. In *Proceedings of the Second Symposium on Example Papers*, pages  
25–26. Society of Example Results



# List of co-authored publications not included in the thesis

- Author, A., Coauthor, C., and Supervisor, S. (2009). Not Included Paper A. In *Proceedings of the Third Symposium on Example Papers*, pages 125–126. Society of Example Results
- Author, A., Coauthor, C., and Supervisor, S. (2010). Not Included Paper B. In *Proceedings of the Fourth Symposium on Example Papers*, pages 35–36. Society of Example Results
- Author, A., Coauthor, C., and Supervisor, S. (2011). Not Included Paper C. In *Proceedings of the Fifth Symposium on Example Papers*, pages 15–16. Society of Example Results



# Contents

<b>1</b>	<b>The First Chapter</b>	<b>1</b>
1.1	Figures and Tables . . . . .	1
1.2	Another Section . . . . .	1
<b>2</b>	<b>The Second Chapter</b>	<b>3</b>
2.1	Sample Section . . . . .	3
<b>3</b>	<b>The Third Chapter</b>	<b>5</b>
3.1	Sample Section . . . . .	5
	<b>Paper I</b>	<b>7</b>
	<b>Paper II</b>	<b>12</b>



# Chapter 1

## The First Chapter

This is the first chapter. It contains a lot of text. Footnotes can also be used<sup>1</sup>. Remember to format the URLs<sup>2</sup>. For adding a citation in parentheses, use the *citep* command (Author et al., 2015). If you need to refer to the name of the author, use the *cite* command, for example when talking about the esteemed Author et al. (2008).

### 1.1 Figures and Tables

When referring to figures, use the *ref* command. This ensures numbering will stay correct when adding or removing sections. For example, let's talk about Figure 1.1. Then, let's mention Table 1.1.

### 1.2 Another Section

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed quis tempus ipsum. Nulla ornare velit sit amet lectus aliquam, eget elementum diam faucibus. Phasellus scelerisque elit non leo fringilla, non dictum risus eleifend. Morbi suscipit eleifend augue ut vehicula. Proin at dolor tincidunt arcu convallis vestibulum vitae eget erat. Quisque a quam libero. Donec scelerisque, nisl in consectetur rhoncus, dolor ex vestibulum ante, non porttitor nisi tellus eget nulla. Ut maximus vitae neque vel porta. Morbi suscipit tristique leo vitae aliquam. Nullam congue malesuada scelerisque. Sed viverra ipsum id quam tempor, eget posuere lacus fringilla. Suspendisse sit amet orci augue. Aliquam tincidunt volutpat purus scelerisque sollicitudin. Fusce eleifend porttitor velit tincidunt commodo. Etiam rhoncus nunc eget sapien pretium, vitae blandit tortor elementum. Nam placerat eu metus ut ultrices.

---

<sup>1</sup>This is a footnote

<sup>2</sup><http://www.example.com>

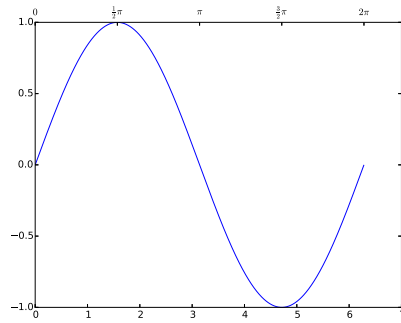


Figure 1.1: This is a caption. Example figure made with matplotlib (<http://matplotlib.org>).

Key	Value	Index
Example A	100	1
Example B	1000	2
Example C	5	3

Table 1.1: This is a caption.



## Chapter 2

# The Second Chapter

This is chapter two. here we now go into the dirty and ugly details of this work.

### 2.1 Sample Section

Bla, bla, bla. Bla, bla, bla. Bla, bla, bla. Bla, bla, bla.



## **Chapter 3**

# **The Third Chapter**

This is chapter three.

### **3.1 Sample Section**

And this is a section of chapter three.



# Bibliography

- Author, A., Coauthor, C., and Supervisor, S. (2008). Example Paper II. In *Proceedings of the Second Symposium on Example Papers*, pages 25–26. Society of Example Results.
- Author, A., Coauthor, C., and Supervisor, S. (2009). Not Included Paper A. In *Proceedings of the Third Symposium on Example Papers*, pages 125–126. Society of Example Results.
- Author, A., Coauthor, C., and Supervisor, S. (2010). Not Included Paper B. In *Proceedings of the Fourth Symposium on Example Papers*, pages 35–36. Society of Example Results.
- Author, A., Coauthor, C., and Supervisor, S. (2011). Not Included Paper C. In *Proceedings of the Fifth Symposium on Example Papers*, pages 15–16. Society of Example Results.
- Author, A., Coauthor, C., and Supervisor, S. (2015). Example Paper I. *Example Journal*, 15(6):100–101.



# Paper I

## Example Paper I

Author, Anne and Coauthor, Carl and Supervisor, Sally (2015). *Example Journal*, 15(6):100–101





# Example Paper

ANNE AUTHOR, CARL COAUTHOR, SALLY SUPERVISOR \*

Example University

## Abstract

*Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi convallis nunc est, et commodo urna tincidunt vitae. Maecenas ut magna vitae nisl ullamcorper commodo id in orci. Suspendisse sollicitudin mi in tortor ultrices, non auctor magna accumsan. Nulla facilisi. Praesent blandit gravida nunc vitae mattis. Donec nisl purus, consequat vel justo in, iaculis lobortis leo. Vestibulum lacinia magna quis suscipit fermentum. Nulla venenatis interdum tellus eu vehicula. Donec egestas eleifend justo, in lobortis sem varius at.*

**L**orem ipsum dolor sit amet, consectetur adipiscing elit. Mauris nec nibh nec velit tempor accumsan eu et enim. Mauris molestie placerat erat elementum bibendum. Sed sed tincidunt mauris. Vivamus nunc erat, posuere ut ante at, varius commodo lacus. Integer sagittis tincidunt diam mattis elementum. Suspendisse convallis lacus gravida dui venenatis facilisis. Duis vel porta lorem, quis pretium ex. Quisque massa felis, efficitur at augue nec, mattis faucibus neque. Ut eu risus vel quam pulvinar dignissim malesuada nec ex. Proin malesuada ipsum nulla, eu egestas justo ullamcorper vel. Nulla ipsum sapien, molestie vitae risus ut, ultrices vestibulum felis. Aliquam elementum mollis massa et scelerisque.

Morbi vestibulum, nisl quis interdum aliquet, est magna lacinia diam, eu porttitor felis purus quis felis. Cras congue elementum dui in pretium. Maecenas at ultricies mi, in bibendum augue. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Nullam a suscipit mauris, non tempus nunc. Nullam augue augue, pellentesque at accumsan in, elementum ut turpis. Nam aliquam diam nisi, tempus euismod nisi luctus at. Vivamus cursus, enim sed tincidunt

auctor, arcu sapien maximus turpis, ac placerat metus metus non arcu. Integer facilisis tempus libero. Maecenas ultrices, justo bibendum imperdiet lacinia, urna tortor facilisis velit, at ultrices elit neque a lectus. Morbi eleifend finibus sollicitudin. Vivamus tempus vulputate maximus. Curabitur quis tellus ut massa sagittis scelerisque. Sed vel turpis varius, efficitur nibh ac, suscipit nunc.

Mauris at enim sollicitudin, efficitur orci nec, aliquet nunc. Nullam pretium, sapien nec commodo sagittis, metus turpis aliquam nisi, non tincidunt metus ex sit amet lectus. Curabitur quam urna, mattis eu cursus eu, tristique a est. Vestibulum interdum risus et purus vestibulum faucibus. Suspendisse scelerisque fringilla ipsum ac pharetra. Nullam condimentum tellus dui, in imperdiet erat placerat id. Duis consequat leo neque, ut hendrerit tellus varius in. Aliquam et efficitur nunc. Pellentesque semper arcu nec pulvinar porttitor. Nulla facilisi. Nulla ultrices eleifend leo sit amet accumsan. Integer accumsan nibh id felis tincidunt fermentum. Nulla tempor tortor eu elementum placerat. Curabitur fermentum tincidunt posuere. Vestibulum placerat orci risus. Vivamus et molestie sem, eu tincidunt mauris.

---

\*Template by <http://www.howtotex.comhowtoTeX.com>



# Paper II

## Example Paper II

Author, Anne and Coauthor, Carl and Supervisor, Sally (2008). In *Proceedings of the Second Symposium on Example Papers*, pages 25–26. Society of Example Results



---

# Example Paper

ANNE AUTHOR, CARL COAUTHOR, SALLY SUPERVISOR \*

Example University

## Abstract

*Lorem ipsum dolor sit amet, consectetur adipiscing elit. Morbi convallis nunc est, et commodo urna tincidunt vitae. Maecenas ut magna vitae nisl ullamcorper commodo id in orci. Suspendisse sollicitudin mi in tortor ultrices, non auctor magna accumsan. Nulla facilisi. Praesent blandit gravida nunc vitae mattis. Donec nisl purus, consequat vel justo in, iaculis lobortis leo. Vestibulum lacinia magna quis suscipit fermentum. Nulla venenatis interdum tellus eu vehicula. Donec egestas eleifend justo, in lobortis sem varius at.*

**L**orem ipsum dolor sit amet, consectetur adipiscing elit. Mauris nec nibh nec velit tempor accumsan eu et enim. Mauris molestie placerat erat elementum bibendum. Sed sed tincidunt mauris. Vivamus nunc erat, posuere ut ante at, varius commodo lacus. Integer sagittis tincidunt diam mattis elementum. Suspendisse convallis lacus gravida dui venenatis facilisis. Duis vel porta lorem, quis pretium ex. Quisque massa felis, efficitur at augue nec, mattis faucibus neque. Ut eu risus vel quam pulvinar dignissim malesuada nec ex. Proin malesuada ipsum nulla, eu egestas justo ullamcorper vel. Nulla ipsum sapien, molestie vitae risus ut, ultrices vestibulum felis. Aliquam elementum mollis massa et scelerisque.

Morbi vestibulum, nisl quis interdum aliquet, est magna lacinia diam, eu porttitor felis purus quis felis. Cras congue elementum dui in pretium. Maecenas at ultricies mi, in bibendum augue. Class aptent taciti sociosqu ad litora torquent per conubia nostra, per inceptos himenaeos. Nullam a suscipit mauris, non tempus nunc. Nullam augue augue, pellentesque at accumsan in, elementum ut turpis. Nam aliquam diam nisi, tempus euismod nisi luctus at. Vivamus cursus, enim sed tincidunt

auctor, arcu sapien maximus turpis, ac placerat metus metus non arcu. Integer facilisis tempus libero. Maecenas ultrices, justo bibendum imperdiet lacinia, urna tortor facilisis velit, at ultrices elit neque a lectus. Morbi eleifend finibus sollicitudin. Vivamus tempus vulputate maximus. Curabitur quis tellus ut massa sagittis scelerisque. Sed vel turpis varius, efficitur nibh ac, suscipit nunc.

Mauris at enim sollicitudin, efficitur orci nec, aliquet nunc. Nullam pretium, sapien nec commodo sagittis, metus turpis aliquam nisi, non tincidunt metus ex sit amet lectus. Curabitur quam urna, mattis eu cursus eu, tristique a est. Vestibulum interdum risus et purus vestibulum faucibus. Suspendisse scelerisque fringilla ipsum ac pharetra. Nullam condimentum tellus dui, in imperdiet erat placerat id. Duis consequat leo neque, ut hendrerit tellus varius in. Aliquam et efficitur nunc. Pellentesque semper arcu nec pulvinar porttitor. Nulla facilisi. Nulla ultrices eleifend leo sit amet accumsan. Integer accumsan nibh id felis tincidunt fermentum. Nulla tempor tortor eu elementum placerat. Curabitur fermentum tincidunt posuere. Vestibulum placerat orci risus. Vivamus et molestie sem, eu tincidunt mauris.

---

\*Template by <http://www.howtotex.com>howtoTeX.com

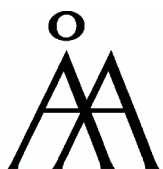
# TURKU CENTRE *for* COMPUTER SCIENCE

Joukahaisenkatu 3-5 B, 20520 Turku, Finland | [www.tucs.fi](http://www.tucs.fi)



## University of Turku

- Department of Information Technology
- Department of Mathematics



## Åbo Akademi University

- Department of Information Technologies



## Turku School of Economics

- Institute of Information Systems Sciences

ISBN ????-???????

ISSN 1239-1883