# TABLE OF CONTENTS

## CHAPTER 1
Introduction 7

## CHAPTER 2
Cognitive dysfunction and dementia in Parkinson’s disease 19

## CHAPTER 3.1
Resting state oscillatory brain dynamics in Parkinson’s disease: an MEG study 35

## CHAPTER 3.2
Cholinergic modulation of MEG resting state oscillatory activity in Parkinson’s disease related dementia 57

## CHAPTER 4.1
Increased cortico-cortical functional connectivity in early stage Parkinson’s disease: an MEG study 73

## CHAPTER 4.2
MEG resting state functional connectivity in Parkinson’s disease related dementia 95

## CHAPTER 5
Pathological brain network organization in Parkinson’s disease related dementia 117

## CHAPTER 6
Summary and general discussion 135

## CHAPTER 7
Appendices 151