GROUP SCHEDULING AND ASSIGNMENT: COMPLEXITY AND ALGORITHMS

A DISSERTATION
SUBMITTED TO THE DEPARTMENT OF COMPUTER SCIENCE
AND THE COMMITTEE ON GRADUATE STUDIES
OF STANFORD UNIVERSITY
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY

Hooyeon Lee
December 2016

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

(Virginia V. Williams) Principal Adviser

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

(Ashish Goel)

I certify that I have read this dissertation and that, in my opinion, it is fully adequate in scope and quality as a dissertation for the degree of Doctor of Philosophy.

(Yoav Shoham)

Approved for the Stanford University Committee on Graduate Studies

Abstract

Acknowledgments

Contents

List of Tables

List of Figures

Chapter 1

Introduction

Chapter 2

Complexity of Group Scheduling Problem I

Chapter 3

Complexity of Group Scheduling Problem II

Chapter 4

Complexity of Group Activity Selection Problem

Chapter 5

Complexity of Stable Invitations Problem

Chapter 6

Incentive Compatibility in Group Assignment Problems

Chapter 7

Open Problems