

Contents

Summary	ix
Resumen	xi
Resum	xv
General Index	xix
List of Figures	xx
List of Tables	xxi
1 Introduction	1
1.1 Motivation	1
1.1.1 Optimization in Planning & Scheduling	1
1.1.2 Contributions of this thesis	5
1.1.3 Case study: Container Terminals	6
1.2 Objectives	10
1.3 Structure	11
1.4 Publications List	12
1.5 Abbreviations and Acronyms	14

2	Selected papers	15
2.1	Planning: Container Stacking Problem	17
	ICTAI - 2009	19
	Expert Systems with Applications - 2012	29
2.2	Scheduling: Berth Allocation Problem and Quay Crane Assignment problem	55
	Iberamia - 2012	57
	Applied Intelligence - 2014	69
2.3	Planning and Scheduling: Integration Berthing and Container Stacking Problems . . .	101
	Advanced Engineering Informatics - 2011	103
	Knowledge-Based Systems - 2012	143
2.4	Robust Scheduling: Robust Berth Allocation and Quay Crane Assignment Problem .	169
	Mathematical Problems in Engineering - 2014	171
3	General discussion of the results	203
3.1	Planning	203
3.2	Scheduling	205
3.3	Planning and Scheduling	210
3.4	Robust scheduling	211
4	Conclusions	217
	References	219
	Alphabetic Index	225