## Contents

Preface		xi		
1	Intr	oduction 1		
	1.1	What Makes Software Interesting? 2		
		Organization and Summary 7		
	1.3	Research and Discussion Issues 11		
2	Information Technology 13			
	2.1	Information 14		
	2.2	The Constituents of IT 21		
	2.3	Moore's Law 26		
	2.4	Research and Discussion Issues 37		
	2.5	Further Reading 39		
3	Users 41			
	3.1	Applications Present and Future 42		
	3.2	User Value 49		
	3.3	Research and Discussion Issues 63		
	3.4	Further Reading 65		
4	Creating Software 67			
	4.1	Elements of Success 68		
	4.2	Organizing Software Creation 69		
	4.3	Software Architecture 84		
	4.4	Program Distribution and Execution 94		
	4.5	Distributed Software 106		
	4.6	Research and Discussion Issues 118		
	4.7	Further Reading 120		

	معتمد المادي والمدارية					
5	Management 121					
	5.1 Value Chains 122					
	5.2 Total Cost of Ownership 134					
	3 Social Issues in Software Management 135					
		Security as a Distributed Management Example 145				
	5.5 Research and Discussion Issu	Research and Discussion Issues 166				
	5.6 Further Reading 169					
6	Software Supply Industry 171					
6.1 Industrial Organization and Software Architecture 171						
	6.2 Organization of the Software					
	•	3 Business Relationships in the Software Value Chain 185				
	6.4 Research and Discussion Issu	es 196				
	6.5 Further Reading 197		e			
7	Software Creation Industry 199					
	7.1 Industrial Organization of th	e Software Industry	199			
	7.2 Cooperation in the Software	Industry 229				
	7.3 Component Software 244	,				
	7.4 Research and Discussion Issu	ies 263				
	7.5 Further Reading 265					
8	Government 267					
	8.1 Intellectual Property 267		**			
	8.2 Regulation 284					
		99				
	8.4 Research and Discussion Issu		* * * * * * * * * * * * * * * * * * * *			
	8.5 Further Reading 308	103 300	. •			
9	_		*,			
7						
	Jii Demana 510					
	0.4. D					
	0.5 C-1.					
	an Economic Of					
	14000011 and Discussion 1850	ies 347				
10	The Future 351					
	10.1 Slowing Technological Advan	nce 351				
	10.2 Information Appliances 33	53				

10.3 Pervasive Computing 355

10.4 Mobile and Nomadic IT 357

10.5 Research and Discussion Issues 360

10.6 Further Reading 360

Postscript 361

Notes 365

Glossary 375

References 391

About the Authors 403

Name Index 405

Subject Index 409