

# Contents

## Part I Introduction

<b>1</b>	<b>Introduction to Green in Software Engineering . . . . .</b>	<b>3</b>
	Coral Calero and Mario Piattini	

## Part II Environments, Processes and Construction

<b>2</b>	<b>Green Software Engineering Environments . . . . .</b>	<b>31</b>
	Ankita Raturi, Bill Tomlinson, and Debra Richardson	
<b>3</b>	<b>Processes for Green and Sustainable Software Engineering . . . . .</b>	<b>61</b>
	Eva Kern, Stefan Naumann, and Markus Dick	
<b>4</b>	<b>Constructing Green Software Services: From Service Models to Cloud-Based Architecture . . . . .</b>	<b>83</b>
	Fei Li, Soheil Qanbari, Michael Vögler, and Schahram Dustdar	

## Part III Economic and Other Qualities

<b>5</b>	<b>Economic Aspects of Green ICT . . . . .</b>	<b>107</b>
	Héctor Fernández, Giuseppe Procaccianti, and Patricia Lago	
<b>6</b>	<b>Green Software Quality Factors . . . . .</b>	<b>129</b>
	Juha Taina and Simo Mäkinen	

## Part IV Software Development Process

<b>7</b>	<b>From Requirements Engineering to Green Requirements Engineering . . . . .</b>	<b>157</b>
	Birgit Penzenstadler	
<b>8</b>	<b>Towards Green Software Testing . . . . .</b>	<b>187</b>
	Macario Polo	

<b>9</b>	<b>Green Software Maintenance . . . . .</b>	<b>205</b>
	Ignacio García-Rodríguez de Guzmán, Mario Piattini, and Ricardo Pérez-Castillo	
<b>10</b>	<b>Green Software and Software Quality . . . . .</b>	<b>231</b>
	Coral Calero, M <sup>a</sup> Ángeles Moraga, Manuel F. Bertoa, and Leticia Duboc	
<b>11</b>	<b>Green Software Measurement . . . . .</b>	<b>261</b>
	M <sup>a</sup> Ángeles Moraga and Manuel F. Bertoa	
 <b>Part V Practical Issues</b>		
<b>12</b>	<b>A Decision-Making Model for Adopting Green ICT Strategies . . . .</b>	<b>285</b>
	Qing Gu, Patricia Lago, and Paolo Bozzelli	
<b>13</b>	<b>Participation and Open Innovation for Sustainable Software Engineering . . . . .</b>	<b>301</b>
	Martin Mahaux and Annick Castiaux	
	<b>Index . . . . .</b>	<b>325</b>

Green in Software Engineering

Calero, C.; Piattini, M. (Eds.)

2015, XII, 327 p. 111 illus., 68 illus. in color., Hardcover

ISBN: 978-3-319-08580-7