Contents

Part I  Software Crowdsourcing Concepts and Design Issues

Crowdsourcing for Large-Scale Software Development ............... 3
Wei Li, Wei-Tek Tsai and Wenjun Wu

The Five Stages of Open Source Volunteering ....................... 25
Dirk Riehle

Worker-Centric Design for Software Crowdsourcing:
Towards Cloud Careers ........................................... 39
Dave Murray-Rust, Ognjen Scekic and Donghui Lin

Part II  Software Crowdsourcing Models and Architectures

Bootstrapping the Next Generation of Social Machines .......... 53
Dave Murray-Rust and Dave Robertson

Multi-Agent System Approach for Modeling
and Supporting Software Crowdsourcing .......................... 73
Xinjun Mao, Fu Hou and Wei Wu

Supporting Multilevel Incentive Mechanisms in Crowdsourcing
Systems: An Artifact-Centric View .................................. 91
Ognjen Scekic, Hong-Linh Truong and Schahram Dustdar

An Evolutionary and Automated Virtual Team Making
Approach for Crowdsourcing Platforms ........................... 113
Tao Yue, Shaukat Ali and Shuai Wang
Collaborative Majority Vote: Improving Result Quality in Crowdsourcing Marketplaces .............................................. 131
Dennis Nordheimer, Khrystyna Nordheimer, Martin Schader and Axel Korthaus

Towards a Game Theoretical Model for Software Crowdsourcing Processes .......................................................... 143
Wenjun Wu, Wei-Tek Tsai, Zhenghui Hu and Yuchuan Wu

Part III Software Crowdsourcing Systems

TRUSTIE: A Software Development Platform for Crowdsourcing ......................................................... 165
Huaimin Wang, Gang Yin, Xiang Li and Xiao Li

Social Clouds: Crowdsourcing Cloud Infrastructure ................................................................. 191
Kyle Chard and Simon Caton

Recommending Web Services Using Crowdsourced Testing Data .................................................. 219
Hailong Sun, Wancai Zhang, Minzhi Yan and Xudong Liu

A Cloud-Based Infrastructure for Crowdsourcing Data from Mobile Devices ...................................................... 243
Nicolas Haderer, Fawaz Paraiso, Christophe Ribeiro, Philippe Merle, Romain Rouvoy and Lionel Seinturier

Index ................................................................................................................................. 267