

Rolf Dornberger  
Editor

# Business Information Systems and Technology 4.0

New Trends in the Age of Digital Change

 Springer

# Contents

<b>Digitalization: Yesterday, Today and Tomorrow</b> . . . . .	1
Rolf Dornberger, Terry Inglese, Safak Korkut and Vivienne Jia Zhong	
<b>Part I Information Systems</b>	
<b>ERP Systems Towards Digital Transformation</b> . . . . .	15
Petra Maria Asprion, Bettina Schneider and Frank Grimberg	
<b>Determining Information Relevance Based on Personalization Techniques to Meet Specific User Needs</b> . . . . .	31
Barbara Thönssen, Hans Friedrich Witschel and Oleg Rusinov	
<b>Case-Based Reasoning for Process Experience</b> . . . . .	47
Andreas Martin and Knut Hinkelmann	
<b>Road to Agile Requirements Engineering: Lessons Learned from a Web App Project</b> . . . . .	65
Rainer Telesko	
<b>Part II E-Business Applications</b>	
<b>E-Business in the Era of Digital Transformation</b> . . . . .	81
Uwe Leimstoll, Achim Dannecker, Hanspeter Knechtli, Michael Quade, Christian Tanner and Ralf Wöfle	
<b>Digitalizing B2B Business Processes—The Learnings from E-Invoicing</b> . . . . .	103
Christian Tanner and Sarah-Louise Richter	
<b>Marketing Automation</b> . . . . .	117
Martina Dalla Vecchia and Marc K. Peter	

### **Part III Web 2.0 Revolution**

<b>FHNW Maturity Models for Cloud and Enterprise IT</b> . . . . .	133
Stella Gatzju Grivas, Marco Peter, Claudio Giovanoli and Kathrin Hubli	

<b>Digital Transformation Management and Digital Business Development</b> . . . . .	147
Dino Schwaferts and Shama Baldi	

<b>Using Feedback Systems Thinking to Explore Theories of Digital Business for Medtech Companies</b> . . . . .	161
Michael von Kutzschenbach, Alexander Schmid and Lukas Schoenenberger	

<b>Ontology-Based Metamodeling</b> . . . . .	177
Knut Hinkelmann, Emanuele Laurenzi, Andreas Martin and Barbara Thönssen	

### **Part IV Artificial Intelligence**

<b>Searching and Browsing in Historical Documents—State of the Art and Novel Approaches for Template-Based Keyword Spotting</b> . . . . .	197
Michael Stauffer, Andreas Fischer and Kaspar Riesen	

<b>How to Teach Blockchain in a Business School</b> . . . . .	213
Walter Dettling	

<b>Computational Intelligence in Modelling, Simulation, Optimization, and Control</b> . . . . .	227
Thomas Hanne and Rolf Dornberger	

<b>Innovation Potential for Human Computer Interaction Domains in the Digital Enterprise</b> . . . . .	243
Stephan Jüngling, Jonas Lutz, Safak Korkut and Janine Jäger	

<b>Prototype-Based Research on Immersive Virtual Reality and on Self-Replicating Robots</b> . . . . .	257
Rolf Dornberger, Safak Korkut, Jonas Lutz, Janina Berga and Janine Jäger	

<b>Co-robots from an Ethical Perspective</b> . . . . .	275
Oliver Bendel	