Table of Contents

Foreword
Preface
Acknowledgment

**Section 1 Foundational Issues**

**Chapter 1**
How Big does Big Data Need To Be?
  * Martin Stange, Leuphana University, Germany
  * Burkhardt Funk, Leuphana University, Germany

**Chapter 2**
Strategic management of data and challenges for organizations, strategy development and business value
  * Stephen Andrew Roberts, University of West London, United Kingdom
  * Bruce Laurie, University of West London, United Kingdom

**Chapter 3**
Data Stream Mining of Event and Complex Event Streams: A Survey of Existing and Future Technologies and Applications in Big Data
  * Chris Wrench, University of Reading, United Kingdom
  * Frederic Stahl, University of Reading, United Kingdom
  * Giuseppe Di Fatta, University of Reading, United Kingdom
  * Vidyalakshmi Karthikeyan, BT, United Kingdom
  * Detlef D. Nauck, BT, United Kingdom

**Chapter 4**
Research Challenges in Big Data Analytics
  * Sivamathi Chokkalingam, Bharathiar University, India
  * Vijayarani S., Bharathiar University, India

**Section 2 Tools and methods**

**Chapter 5**
Descriptive and Predictive Analytical Methods for Big Data
  * Sema A. Kalaian, Eastern Michigan University, USA
  * Rafa M. Kasim, Indian Tech University, USA
  * Nabeel R. Kasim, University of Michigan, USA
Chapter 6
A Framework to Analyze Enterprise Social Network Data
   Janine Viol, University of Erlangen-Nuremberg, Germany
   Freimut Bodendorf, University of Erlangen-Nuremberg, Germany
   Pascal Lorenz, University of Haute Alsace, France

Chapter 7
Big Data Analytics Using Local Exceptionality Detection
   Martin Atzmueller, University of Kassel, Germany
   Dennis Mollenhauer, University of Kassel, Germany
   Andreas Schmidt, University of Kassel, Germany

Chapter 8
Statistical Features for Extractive Automatic Text Summarization
   Yogesh Kumar Meena, MNIT Jaipur, India
   Dinesh Gopalani, MNIT Jaipur, India

Section 3 Case studies and application areas

Chapter 9
Data Modeling and Knowledge Discovery in Process Industries
   Benjamin Klöpper, ABB Corporate Research Center, Germany
   Marcel Dix, ABB Corporate Research Center, Germany
   David Arnu, RapidMiner GmbH, Germany
   Dikshith Siddapura, ABB Corporate Research Center, Germany

Chapter 10
Data Preparation for Big Data Analytics: Methods & Experiences
   Andreas Schmidt, University of Kassel, Germany
   Martin Atzmueller, University of Kassel, Germany
   Martin Hollender, ABB Corporate Research Center, Germany

Chapter 11
Semantification of Large Corpora of Technical Documentation
   Sebastian Furth, denkbares GmbH, Germany
   Joachim Baumeister, denkbares GmbH and University of Würzburg, Germany

Chapter 12
Application of Complex Event Processing Techniques to Big Data Related to Healthcare. A Systematic Literature Review of Case Studies
Chapter 13
Using Big Data in collaborative learning
  Liz Sokolowski, University of West London, United Kingdom
  Samia Oussena, University of West London, United Kingdom

Compilation of References

About the Contributors

Index