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BIG DATA CHALLENGES

Society, Security,
Innovation and Ethics

Edited by
**Anno Bunnik,
Anthony Cawley,
Michael Mulqueen and
Andrej Zwitter**



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We would like to thank our institutions for facilitating the fruitful dialogue that resulted in this work, as well as all those who supported our work in any shape or form.

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Introduction to Big Data Challenges

*Anno Bunnik, Anthony Cawley, Michael Mulqueen,
and Andrej Zwitter*

Abstract This chapter introduces the rationale for the book. It explains why Big Data is one of the most prominent challenges of our time, with far-reaching implications for society and security. It sets out why the tension, and interaction, between innovation and ethics is at the forefront of the various challenges of Big Data. It clarifies the division of the book into Part I, ‘Between Mathematics and Philosophy’, and Part II on ‘Implications for Security’. Each chapter is also briefly introduced to the reader.

Keywords Introduction • Big Data • Security • Society • Innovation • Ethics

This book unravels implications for society and security of a seismic shift in science, engineering, and computing. Driving the shift is ‘Big Data’, a term that loosely refers to remarkable advances in computational processing power, information storage, and clever software programmes. Whilst there is no universal definition of Big Data, it can be understood as referring to vast digital data sets that often capture very personal information of citizens and consumers. Examples would include Google searches, WhatsApp messages, or financial transaction flows by Walmart’s clientele.

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