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   Titolo   Applications of Data-Centric Science to Social Design : Qualitative and Quantitative Understanding of Collective Human Behavior / / edited by Aki-Hiro Sato

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   Soggetti   Knowledge management
                         Management
                         Industrial management
                         Management information systems
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                         Sociophysics
                         Econophysics
                         Knowledge Management
                         Innovation/Technology Management
                         Business Information Systems
                         Statistics for Social Sciences, Humanities, Law
                         Data-driven Science, Modeling and Theory Building

   Lingua di pubblicazione   Inglese

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   Nota di contenuto   Part A: Methods for Data Analysis and Design -- Chapter 1: How we design our society from data-centric point of view -- Chapter 2: Practical methods of data analysis -- Chapter 3: How to design data products with heterogeneous stakeholders -- Chapter 4: Designing Human-Machine Systems Focusing on Benefits of Inconvenience -- Part B: Mathematical Foundation of Collective Human Behavior -- Chapter 5: A simple model for information cascade and Two kinds of phase transitions -- Chapter 6: Information cascade model on networks I -- Chapter 7: Information cascade on networks II -- Chapter 8: Correlation function for generalized Polya urns: Finite-size scaling

analysis -- Chapter 9: Pitman distribution and Big data analysis of Japanese election -- Chapter 10: Exact Scale Invariance in Mixing of Binary Candidates: Big data analysis -- Chapter 11: Phase transition in a voting experiment of two-choice quiz -- Chapter 12: Phase transition in generalized Polya urn in Information cascade experiment.

Sommario/riassunto	The intention behind this book is to illustrate the deep relation among human behavior, data-centric science, and social design. In fact, these three issues have been independently developing in different fields, although they are, of course, deeply interrelated to one another. Specifically, fundamental understanding of human behavior should be employed for investigating our human society and designing social systems. Insights and both quantitative and qualitative understandings of collective human behavior are quite useful when social systems are designed. Fundamental principles of human behavior, theoretical models of human behavior, and information cascades are addressed as aspects of human behavior. Data-driven investigation of human nature, social behavior, and societal systems are developed as aspects of data-centric science. As design aspects, how to design social systems from heterogeneous memberships is explained. There is also discussion of these three aspects—human behavior, data-centric science, and social design—independently and with regard to the relationships among them.