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Titolo	Applications of Systems Thinking and Soft Operations Research in Managing Complexity : From Problem Framing to Problem Solving // edited by Anthony J. Masys
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ISBN	3-319-21106-4
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (320 p.)
Collana	Advanced Sciences and Technologies for Security Applications, , 1613-5113
Disciplina	658.403
Soggetti	Statistical physics Dynamical systems Operations research Decision making Social sciences System safety Computer simulation Complex Systems Operations Research/Decision Theory Methodology of the Social Sciences Security Science and Technology Simulation and Modeling Statistical Physics and Dynamical Systems
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	Part 1: Organizational Theme -- Using systems modeling to examine law enforcement collaboration in the response to serious crime -- Managing Complexity in Organizations through a Systemic Network of Projects -- Family of Related Systemic Elements (FoRSE™) Matrix: Big (ger) Picture Thinking and Application for Business and Organizations -- Part 2: Disaster Management Theme -- Disentangling wicked problems: a reflexive approach towards resilience governance -- Post-

disaster reconstruction – what does it mean to rebuild with resilience
-- Black swans, dragon kings and beyond: towards predictability and
suppression of extreme all-hazards events through modeling and
simulation -- Part 3: Systems approaches Theme -- Supporting
Intelligence Analysis through visual thinking -- The Benefits of
systems-thinking approach to accident investigation -- Systems Theory
as a foundation for discovery of pathologies from complex system
problem formulation -- Soft (?) social systems and shocks: an
experiment with an agent based model -- System Failure? Why
humanitarian assistance can't meet its objectives without systems
thinking- and why it finds it so hard to use it -- Using First Nations
systems thinking to operationalize sustainable development.

Sommario/riassunto

This book captures current trends and developments in the field of systems thinking and soft operations research which can be applied to solve today's problems of dynamic complexity and interdependency. Such 'wicked problems' and messes are seemingly intractable problems characterized as value-laden, ambiguous, and unstable, that resist being tamed by classical problem solving. Actions and interventions associated with this complex problem space can have highly unpredictable and unintended consequences. Examples of such complex problems include health care reform, global climate change, transnational serious and organized crime, terrorism, homeland security, human security, disaster management, and humanitarian aid. Moving towards the development of solutions to these complex problem spaces depends on the lens we use to examine them and how we frame the problem. It will be shown that systems thinking and soft operations research has had great success in contributing to the management of complexity. .
