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Descrizione fisica	1 online resource (212 pages)
Collana	Risk, Systems and Decisions, , 2626-6725
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Soggetti	Environmental management System theory Control theory Environmental sciences - Mathematics Energy policy Environmental Management Systems Theory, Control Mathematical Applications in Environmental Science Energy Policy, Economics and Management
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Nota di contenuto	PartI: Foundations of Resilience -- Chapter1: Risk and Resilience: Similarities and Differences -- Chapter2: Resilience as Function of Space and Time -- Chapter3: Panarchy: Thinking in Systems and Networks -- Chapter4: Lessons from History -- PartII: Resilience Assessment: State of Science and Governance -- Chapter5: Resilience and Governance -- Chapter6: Resilience Quantification and Assessment -- PartIII: Resilience Management: State of Practice and Case Studies -- Chapter7: The State of Practice -- Chapter8: Metrics-based Approaches -- Chapter9: Applications of Network Science and Systems Thinking -- Chapter10: Conclusion. .
Sommario/riassunto	This book offers a comprehensive view on resilience based upon state-of-the-science theories and methodological applications that resilience may fill. Specifically, this text provides a compendium of knowledge on

the theory, methods, and practice of resilience across a variety of country and case contexts, and demonstrates how a resilience-based approach can help further improved infrastructure, vibrant societies, and sustainable environments and ecologies, among many others. Resilience is a term with thousands of years of history. Only recently has resilience been applied to the management of complex interconnected systems, yet its impact as a governing philosophy and an engineering practice has been pronounced. Colloquially, resilience has been used as a synonym for 'bouncing back'. Philosophically and methodologically, however, it is much more. In a world defined by interconnected and interdependent systems such as water, food, energy, transportation, and the internet, a sudden and unexpected disruption to one critical system can lead to significant challenges for many others. The Science and Practice of Resilience is beneficial for those seeking to gain a rich knowledge of the resilience world, as well as for practitioners looking for methods and tools by which resilience may be applied in real-world contexts.

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