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		Computer security
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		Information storage and retrieval
		Computer Communication Networks
		Systems and Data Security
		Cryptology
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	Lingua di pubblicazione	Inglese
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	Nota di contenuto	Chapter 1. Introduction -- Chapter 2. Blockchain and Data Sharing -- Chapter 3. Layered Data Sharing Architecture with Blockchain -- Chapter 4. Secure Homogeneous Data Sharing Using Blockchain -- Chapter 5. Secure Heterogeneous Data Sharing Using Blockchain -- Chapter 6. Secure Data Retrieval Using Blockchain -- Chapter 7. Data Sharing Incentives with Blockchain.
	Sommario/riassunto	With the development of big data, data sharing has become increasingly popular and important in optimizing resource allocation and improving information utilization. However, the expansion of data sharing means there is an urgent need to address the issue of the privacy protection – an area where the emerging blockchain technology offers considerable advantages. Although there are a large number of research papers on data sharing modeling and analysis of network security, there are few books dedicated to blockchain-based secure data sharing. Filing this gap in the literature, the book proposes a new data-sharing model based on the blockchain system, which is being

increasingly used in medical and credit reporting contexts. It describes in detail various aspects of the model, including its role, transaction structure design, secure multi-party computing and homomorphic encryption services, and incentive mechanisms, and presents corresponding case studies. The book explains the security architecture model and the practice of building data sharing from the blockchain infrastructure, allowing readers to understand the importance of data sharing security based on the blockchain framework, as well as the threats to security and privacy. Further, by presenting specific data sharing case studies, it offers insights into solving data security sharing problems in more practical fields. The book is intended for readers with a basic understanding of the blockchain infrastructure, consensus mechanisms, smart contracts, secure multiparty computing, homomorphic encryption and image retrieval technologies.