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Descrizione fisica	1 online resource (XV, 315 p. 115 illus., 83 illus. in color.)
Collana	Studies in Systems, Decision and Control, , 2198-4182 ; ; 339
Disciplina	621.39
Soggetti	Computational intelligence Computer engineering Cooperating objects (Computer systems) Embedded computer systems Internet of things
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	Realizing Cyber-Physical Systems Resilience Frameworks and Security Practices -- Machine learning for fostering security in Cyber-Physical systems -- Security of Cyber-Physical Monitoring and Warning Systems for Natural and Technological Threats -- Secure Dynamic Nonlinear Heterogeneous Vehicle Platooning: Denial-of-Service Cyber-Attack Case.
Sommario/riassunto	This book is a relevant reference for any readers interested in the security aspects of Cyber-Physical Systems and particularly useful for those looking to keep informed on the latest advances in this dynamic area. Cyber-Physical Systems (CPSs) are characterized by the intrinsic combination of software and physical components. Inherent elements often include wired or wireless data communication, sensor devices, real-time operation and automated control of physical elements. Typical examples of associated application areas include industrial control systems, smart grids, autonomous vehicles and avionics, medial monitoring and robotics. The incarnation of the CPSs can therefore range from considering individual Internet-of-Things devices through to large-scale infrastructures. Presented across ten chapters authored

by international researchers in the field from both academia and industry, this book offers a series of high-quality contributions that collectively address and analyze the state of the art in the security of Cyber-Physical Systems and related technologies. The chapters themselves include an effective mix of theory and applied content, supporting an understanding of the underlying security issues in the CPSs domain, alongside related coverage of the technological advances and solutions proposed to address them. The chapters comprising the later portion of the book are specifically focused upon a series of case examples, evidencing how the protection concepts can translate into practical application. .
