Record Nr. UNINA9910483454203321 **Titolo** Hardware supply chain security: threat modelling, emerging attacks and countermeasures / / Basel Halak, editor Pubbl/distr/stampa Cham, Switzerland:,: Springer,, [2021] ©2021 **ISBN** 3-030-62707-1 Edizione [1st ed. 2021.] 1 online resource (XV, 217 p. 2 illus.) Descrizione fisica 005.8 Disciplina Soggetti Computer security Computer input-output equipment - Security measures Computer viruses Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Part I. Threat Modelling of Hardware Supply Chain -- Chapter 1, CIST: A Threat Modelling Approach for Hardware Supply Chain Security -- Part II. Emerging Hardware-based Security Attacks and Countermeasures --Chapter 2. A Cube Attack on a Trojan-Compromised Hardware Implementation of Ascon -- Chapter 3. Anti-counterfeiting Techniques for Resources-Constrained Devices -- Part III. Anomaly Detection in Embedded Systems -- Chapter 4. Anomalous Behaviour in Embedded Systems -- Chapter 5. Hardware Performance Counters (HPCs) for Anomaly Detection -- Chapter 6. Anomaly Detection in an Embedded System. This book presents a new threat modelling approach that specifically Sommario/riassunto targets the hardware supply chain, covering security risks throughout the lifecycle of an electronic system. The authors present a case study on a new type of security attack, which combines two forms of attack mechanisms from two different stages of the IC supply chain. More specifically, this attack targets the newly developed, light cipher (Ascon) and demonstrates how it can be broken easily, when its implementation is compromised with a hardware Trojan. This book also discusses emerging countermeasures, including anti-counterfeit design techniques for resources constrained devices and anomaly detection

methods for embedded systems. .