Record Nr. UNINA9910299205303321 Autore Lu Zhou Titolo Modeling and Evaluating Denial of Service Attacks for Wireless and Mobile Applications / / by Zhou Lu, Wenye Wang, Cliff Wang Pubbl/distr/stampa Cham: .: Springer International Publishing: .: Imprint: Springer. . 2015 **ISBN** 3-319-23288-6 Edizione [1st ed. 2015.] Descrizione fisica 1 online resource (128 p.) Collana SpringerBriefs in Computer Science, , 2191-5768 Disciplina 005.8 Soggetti Computer security Computer communication systems Application software Systems and Data Security Computer Communication Networks Information Systems Applications (incl. Internet) 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 Modeling and Evaluation of Backoff Misbehaving Nodes in CSMA/CA Networks -- Modeling the Impact of Jamming Attacks on Time-Critical Traffic with Applications to Smart Grid -- Minimizing Message Delay of Time-Critical Traffic for Wireless Smart Grid Applications under Jamming -- Understanding the Resilience of Mobile Cloud Services to Malware. Sommario/riassunto This SpringerBrief covers modeling and analysis of Denial-of-Service attacks in emerging wireless and mobile applications. It uses an application-specific methodology to model and evaluate denial-ofservice attacks. Three emerging applications are explored: multi-modal CSMA/CA networks, time-critical networks for the smart grid, and smart phone applications. The authors define a new performance metric to quantify the benefits of backoff misbehavior and show the impacts of a wide range of backoff mishandling nodes on the network performance, and propose a scheme to minimize the delay of timecritical message delivery under jamming attacks in smart grid

applications. An investigation on the resilience of mobile services

against malware attacks is included to advance understanding of network vulnerabilities associated with emerging wireless networks and offers instrumental guidance into the security design for future wireless and mobile applications. This book is appropriate for students, faculty, engineers, and experts in the technical area of wireless communication, mobile networks and cyber security.