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Disciplina	005.82
Soggetti	Cryptography Data encryption (Computer science) Game theory Computer networks Data protection Algorithms Electronic data processing - Management Cryptology Game Theory Computer Communication Networks Data and Information Security IT Operations
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Security Investments and Planning -- Design of Network Topology in an Adversarial Environment -- Optimal Information Security Investment with Penetration Testing -- Privacy and Anonymity -- Tracking Games in Mobile Networks -- gPath: A Game-Theoretic Path Selection Algorithm to Protect Tor's Anonymity -- When Do Firms Invest in

Privacy-Preserving Technologies? -- Adversarial and Robust Control -- Adversarial Control in a Delay Tolerant Network -- Security Interdependencies for Networked Control Systems with Identical Agents -- Robust Control in Sparse Mobile Ad-Hoc Networks -- Network Security and Botnets -- A Game-Theoretical Approach for Finding Optimal Strategies in a Botnet Defense Model -- ISPs and Ad Networks Against Botnet Ad Fraud -- A Localization Game in Wireless Sensor Networks -- Effective Multimodel Anomaly Detection Using Cooperative Negotiation -- Authorization and Authentication -- The Password Game: Negative Externalities from Weak Password Practices -- Towards a Game Theoretic Authorisation Model -- Theory and Algorithms for Security -- Disperse or Unite? A Mathematical Model of Coordinated Attack -- Uncertainty in Interdependent Security Games -- Attack-Defense Trees and Two-Player Binary Zero-Sum Extensive Form Games Are Equivalent -- Methods and Algorithms for Infinite Bayesian Stackelberg Security Games.

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## Sommario/riassunto

Securing complex and networked systems has become increasingly important as these systems play an indispensable role in modern life at the turn of the information age. Concurrently, security of ubiquitous communication, data, and computing poses novel research challenges. Security is a multi-faceted problem due to the complexity of underlying hardware, software, and network interdependencies as well as human and social factors. It involves decision making on multiple levels and multiple time scales, given the limited resources available to both malicious attackers and administrators defending networked systems. Decision and game theory provides a rich set of analytical methods and approaches to address various resource allocation and decision-making problems arising in security. This edited volume contains the contributions presented at the inaugural Conference on Decision and Game Theory for Security - GameSec 2010. These 18 articles (12 full and 6 short papers) are thematically categorized into the following six sections: – “Security investments and planning” contains two articles, which present optimization methods for (security) investments when facing adversaries. – “Privacy and anonymity” has three articles discussing location privacy, online anonymity, and economic aspects of privacy. – “Adversarial and robust control” contains three articles, which investigate security and robustness aspects of control in networks. – “Network security and botnets” has four articles focusing on defensive strategies against botnets as well as detection of malicious adversaries in networks. – “Authorization and authentication” has an article on password practices and another one presenting a game-theoretic authorization model. – “Theory and algorithms for security” contains four articles on various theoretical and algorithmic aspects of security.

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