1. Record Nr. UNINA9910298979703321 Autore Han Jinsong Titolo Device-Free Object Tracking Using Passive Tags / / by Jinsong Han, Wei Xi, Kun Zhao, Zhiping Jiang Cham:,: Springer International Publishing:,: Imprint: Springer,, Pubbl/distr/stampa 2014 **ISBN** 3-319-12646-6 Edizione [1st ed. 2014.] Descrizione fisica 1 online resource (66 p.) Collana SpringerBriefs in Electrical and Computer Engineering, , 2191-8112 621.384192 Disciplina Soggetti Computer communication systems Electrical engineering Application software Computer Communication Networks Communications Engineering, 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 and index. Nota di contenuto Introduction -- Background -- Critical State and Twins -- Dense Deployment Based Tracking System using Twins -- Sparse Deployment based Tracking System using Twins -- Afterword. Sommario/riassunto This SpringerBrief examines the use of cheap commercial passive RFID tags to achieve accurate device-free object-tracking. It presents a sensitive detector, named Twins, which uses a pair of adjacent passive tags to detect uncooperative targets (such as intruders). Twins leverages a newly observed phenomenon called critical state that is caused by interference among passive tags. The author expands on the previous object tracking methods, which are mostly device-based, and reveals a new interference model and their extensive experiments for validation. A prototype implementation of the Twins-based intrusion detection scheme with commercial off-the-shelf reader and tags is also covered in this SpringerBrief. Device-Free Object Tracking Using

Passive Tags is designed for researchers and professionals interested in smart sensing, localization, RFID and Internet of Things applications.

The content is also useful for advanced-level students studying electrical engineering and computer science.