Record Nr. UNINA9910254986603321 Autore Okaie Yutaka Titolo Target Detection and Tracking by Bionanosensor Networks / / by Yutaka Okaie, Tadashi Nakano, Takahiro Hara, Shojiro Nishio Singapore:,: Springer Singapore:,: Imprint: Springer,, 2016 Pubbl/distr/stampa **ISBN** 981-10-2468-5 Edizione [1st ed. 2016.] Descrizione fisica 1 online resource (VIII, 68 p. 47 illus. in color.) Collana SpringerBriefs in Computer Science, , 2191-5768 Disciplina 610.28 Soggetti **Bioinformatics** Biomedical engineering Biotechnology Computational Biology/Bioinformatics Biomedical Engineering/Biotechnology Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di bibliografia Includes bibliographical references at the end of each chapters and index. Nota di contenuto 1 Introduction -- 2 Static Bionanosensor Networks for Target Detection -- 3 Dynamic Bionanosensor Networks for Target Tracking -- 4 Controllability of Mobile Bionanosensors -- 5 Conclusion. This book describes the main ideas, methods, results and resources Sommario/riassunto relevant to the study of bionanosensor networks. Its primary goal is to spark application-oriented studies of molecular communication; that is, to investigate how collections of bionanosensors, referred to here as bionanosensor networks, can be used for practical purposes such as nanomedical sensing. In particular, the book focuses on two key functionalities for nanomedical applications: target detection and target tracking. Bionanosensor networks represent a new interdisciplinary research area that expands the traditional area of network engineering by incorporating the latest advances in bionanotechnology. These networks consist of spatially distributed bionanosensors that are engineered with the help of bionanotechnology. As a research area, bionanosensor networks are aimed at designing robust networks on

the basis of spatially distributed bionanosensors, as well as at

developing innovative applications of those networks.