1. Record Nr. UNINA9910254224303321

Autore	Lã Quang Duy
Titolo	Potential game theory : applications in radio resource allocation / / by Quang Duy Lã, Yong Huat Chew, Boon-Hee Soong
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2016
ISBN	3-319-30869-6
Edizione	[1st ed. 2016.]
Descrizione fisica	1 online resource (XVIII, 158 p. 49 illus., 25 illus. in color.)
Disciplina	621.382
Soggetti	Electrical engineering Game theory Computer networks Communications Engineering, Networks Game Theory Computer Communication Networks
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references at the end of each chapters.
Nota di contenuto	An Introduction to Game Theory -- Potential Games -- Frequency Assignment in Distributed OFDMA-based Systems using Potential Games -- Potential Games Approach to Downlink Multi-cell OFDMA Networks -- Other Applications of Potential Games in Communications and Networking.
Sommario/riassunto	This book offers a thorough examination of potential game theory and its applications in radio resource management for wireless communications systems and networking. The book addresses two major research goals: how to identify a given game as a potential game, and how to design the utility functions and the potential functions with certain special properties in order to formulate a potential game. After proposing a unifying mathematical framework for the identification of potential games, the text surveys existing applications of this technique within wireless communications and networking problems found in OFDMA 3G/4G/WiFi networks, as well as next-generation systems such as cognitive radios and dynamic spectrum access networks. Professionals interested in understanding

the theoretical aspect of this specialized field will find Potential Game Theory a valuable resource, as will advanced-level engineering students. It paves the way for extensive and rigorous research exploration on a topic whose capacity for practical applications is vast but not yet fully exploited.