1.	Record Nr.	UNINA9910298573103321
	Autore	Wu Fan
	Titolo	Game theoretic approaches for spectrum redistribution / / by Fan Wu
	Pubbl/distr/stampa	New York, NY : , : Springer New York : , : Imprint : Springer, , 2014
	ISBN	1-4939-0500-7
	Edizione	[1st ed. 2014.]
	Descrizione fisica	1 online resource (109 p.)
	Collana	SpringerBriefs in Electrical and Computer Engineering, , 2191-8112
	Disciplina	004.6 330.01
	Soggetti	Computer networks Electrical engineering Power electronics Microwaves Optical engineering Computer Communication Networks Communications Engineering, Networks Power Electronics, Electrical Machines and Networks Microwaves, RF and Optical Engineering
	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.
	Nota di contenuto	Introduction -- A Short Tutorial on Game Theory -- State of Art on Channel Allocation -- Game-Theoretic Channel Allocation in Clique -- Game-Theoretic Channel Allocation in Multi-Hop Wireless Networks -- Summary and Open Problems.
	Sommario/riassunto	This brief examines issues of spectrum allocation for the limited resources of radio spectrum. It uses a game-theoretic perspective, in which the nodes in the wireless network are rational and always pursue their own objectives. It provides a systematic study of the approaches that can guarantee the system's convergence at an equilibrium state, in which the system performance is optimal or sub-optimal. The author provides a short tutorial on game theory, explains game-theoretic channel allocation in clique and in multi-hop wireless networks and explores challenges in designing game-theoretic mechanisms for dynamic channel redistribution. Since designing a completely secure

mechanism is extremely expensive or impossible in most of distributed autonomous systems, it is more beneficial to study misbehavior of the nodes and develop light-weighted game-theoretic channel allocation mechanisms. With a mix of theoretical and hands-on information, the brief traces the concepts of game theory, the current state of spectrum allocation in wireless networks and future competition for resources. Thorough yet accessible, the content is ideal for researchers and practitioners working on spectrum redistribution. It is also a helpful resource for researchers and advanced-level students interested in game theory and wireless communications.