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	Nota di contenuto	Introduction to 4G Femtocells -- Ant Colony Algorithm (ACA) based Downlink Resource Allocation in Femtocells -- Cross-Tier Interference Pricing based Uplink Resource Allocation in Two-Tier Networks -- Resource Allocation in Femtocells with Cross-Tier Interference Limits -- Energy Efficient Power Control in Femtocells with Interference Pricing -- Differentiated-Pricing based Power Allocation in Dense Femtocell Networks -- Conclusions and Future Works.
	Sommario/riassunto	This brief examines resource allocation and interference management for 4G femtocells. It introduces 4G femtocells in the context of 4G mobile networks and discusses related technical challenges in resource allocation and interference management. Topics include ant colony algorithm based downlink resource allocation, intelligent scheduling and power control, uplink and downlink for two-tier networks, quality of service (QoS) constraints and the cross-tier interference constraint. The authors present algorithms to alleviate common femtocell-related problems such as subchannel power allocation. The complexity of the proposed resource allocation algorithms is analyzed, and the effectiveness of the proposed algorithms is verified by simulations.

This concise and practical book directly addresses common problems relating to femtocells and resource management. It serves as a useful tool for researchers in the field. Advanced-level students or professionals interested in femtocells and networks will also find the content helpful.