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Descrizione fisica	1 online resource (XXI, 184 p. 48 illus., 1 illus. in color.)
Collana	Lecture Notes in Mobility, , 2196-5544
Disciplina	388.3472
Soggetti	Transportation engineering Traffic engineering Automatic control Operations research Decision making Transportation Technology and Traffic Engineering Control and Systems Theory Operations Research/Decision Theory
Lingua di pubblicazione	Inglese
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Nota di contenuto	Introduction -- Bike Sharing Systems -- Optimization Problems -- Dynamic Decision Making -- The Stochastic-Dynamic Multi-Vehicle Inventory Routing Problem for Bike Sharing Systems -- Lookahead Policies -- Dynamic Lookahead Horizons -- Case Studies -- Managerial Implications -- Future Research.
Sommario/riassunto	This book reports on an operational management approach to improving bike-sharing systems by compensating for fluctuating demand patterns. The aim is to redistribute bikes within the system, allowing it to be “actively” balanced. The book describes a mathematical model, as well as data-driven and simulation-based approaches. Further, it shows how these elements can be combined in a decision-making support system for service providers. In closing, the book uses real-world data to evaluate the method developed and demonstrates that it can successfully anticipate changes in demand, thus supporting efficient scheduling of transport vehicles to manually relocate bikes between stations.

