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	Sommario/riassunto	The storage yard is the operational and geographical centre of most seaport container terminals. Therefore, it is of particular importance for the whole terminal system and plays a major role for trade and transport flows. One of the latest trends in container-storage operations is the automated Rail-Mounted-Gantry-Crane system, which offers dense stacking, and offers low labour costs. This book investigates in how far the operational performance of container terminals is influenced by the design of these storage systems and to what extent the performance is affected by the terminal's framework conditions, and discusses the strategies applied for container stacking and crane scheduling. A detailed simulation model is presented to compare the performance effects of alternative storage designs, innovative planning strategies, and other influencing factors. The results have useful implications for future research as well as practical terminal planning and optimisation.