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Nota di contenuto	Introduction -- Basic Alignment Optimization Models -- Alignment Interactive Design in a 3D Scene -- Single level Optimization of Metro Alignment with Single objective -- Bi level Optimization with Single objective for Railway Alignment -- Bi level and Bi objective Optimization of Railway Alignment in Ecologically Sensitive Area.
Sommario/riassunto	This book deals with alignment optimization models for planning rail transit. After a general introduction to the basics of alignment optimization theory, it presents different alignment optimization methods to deal with different situations. It shows how to set up a 3D GIS scene for alignment interaction design, including location calculation of an alignment, alignment expression in a 3D scene, and the spacial relations between geographic objects, horizontal alignment, and vertical alignment. Further, it presents methods for solving more

complex alignment optimization models, and shows for each different rail transit situation, how to calculate investment, energy consumption, and environmental influence. All in all, this book offers an interesting and timely reading to both researchers and professionals in the field of optimization theory, transportation planning, and GIS.