Increasing capacity at ports and goods movement in the supply chain in general, while also satisfying environmental, economic, political, labor union, and other constraints, is, arguably, the greatest challenge of modern transportation. With space at a premium and costs through the roof, it is increasingly obvious that the traditional solutions are not feasible in the short or even medium term. However, advances in information technology, telecommunications, data management, and computation tools, coupled with recent research in system optimization and control, may provide promising new approaches. Bringing together experts from industry, academia, and other stakeholders, Intelligent Freight Transportation addresses freight transportation problems by raising issues, proposing solutions, and discussing obstacles from different points of view.

Features

• Provides material on advanced technologies for container processing
• Covers fully automated containers and explains cost and performance analysis
• Discusses ports and container terminals, including how they interact with surface transportation and related security issues
• Delineates new strategies for empty container reuse, truck routing, and dispatching to meet time constraints
• Explores topics such as container control systems, fully automated processing technologies, and most agitatingly, how to handle cybersecurity
• Includes near-term approaches promoted by practitioners and industry and longer-term ones considered by academia
• Analyzes labor union issues from the point of view of a labor union activist and academic
• Examines area in a style that can be understood by a wide range of readers, even those who do not have a strong technical background, the book’s focus is not only on theory but also on its application and future directions. This mix of theory, simulation, and technology does more than provide insight into the latest techniques and approaches for improving freight transportation. It also helps you choose the best solution to specific transportation problems.