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Collana	Lecture notes in mathematics (Springer-Verlag) ; ; 1531
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Soggetti	Computer networks - Design and construction Graph theory Programming (Mathematics)
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Nota di contenuto	Motivation -- Network survivability models using node types -- Survivable network design under connectivity constraints — a survey -- Decomposition -- Basic inequalities -- Lifting theorems -- Partition inequalities -- Node partition inequalities -- Lifted r-cover inequalities -- Comb inequalities -- How to find valid inequalities -- Implementation of the cutting plane algorithm -- Computational results.
Sommario/riassunto	The problem of designing a cost-efficient network that survives the failure of one or more nodes or edges of the network is critical to modern telecommunications engineering. The method developed in this book is designed to solve such problems to optimality. In particular, a cutting plane approach is described, based on polyhedral combinatorics, that is able to solve real-world problems of this type in short computation time. These results are of interest for practitioners in the area of communication network design. The book is addressed especially to the combinatorial optimization community, but also to those who want to learn polyhedral methods. In addition, interesting new research problems are formulated.