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Soggetti	Mathematical models Computational intelligence Computer science—Mathematics Artificial intelligence Mathematical Modeling and Industrial Mathematics Computational Intelligence Mathematics of Computing Artificial Intelligence
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Chapter 1, Motivations: What is Constraint Theory and why is it important? -- Chapter 2, The Four-Fold Way: How to Perceive Complex Mathematical Models and Well-Posed Problems -- Chapter 3, General Results: From Protomath to Math to Metamath -- Chapter 4, Regular Relations: Searching for the Kernels of Constraint -- Chapter 5, Model Consistency and Computational Allowability -- Chapter 6, Discrete and Interval Relations: The Diminished Utility of Metamodels -- Chapter 7, The Logical Structure of Constraint Theory: A Compact Summary -- Chapter 8, Examples of Constraint Theory Applied to Real-World Problems -- Chapter 9, Manager and Analyst Meet Again: Gists and Schizophrenia -- Appendices.
Sommario/riassunto	Packed with new material and research, this second edition of George Friedman's bestselling Constraint Theory remains an invaluable reference for all engineers, mathematicians, and managers concerned

with modeling. As in the first edition, this text analyzes the way Constraint Theory employs bipartite graphs and presents the process of locating the “kernel of constraint” trillions of times faster than brute-force approaches, determining model consistency and computational allowability. Unique in its abundance of topological pictures of the material, this book balances left- and right-brain perceptions to provide a thorough explanation of multidimensional mathematical models. Much of the extended material in this new edition also comes from Phan Phan’s PhD dissertation in 2011, titled “Expanding Constraint Theory to Determine Well-Posedness of Large Mathematical Models.” Praise for the first edition: "Dr. George Friedman is indisputably the father of the very powerful methods of constraint theory." --Cornelius T. Leondes, UCLA "Groundbreaking work. ... Friedman's accomplishment represents engineering at its finest. ... The credibility of the theory rests upon the formal proofs which are interspersed among the illuminating hypothetical dialog sequences between manager and analyst, which bring out distinctions that the organization must face, en route to accepting Friedman's work as essential to achieve quality control in developing and applying large models." --John N. Warfield.
