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Titolo	A generalized framework of linear multivariable control // Liansheng Tan
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ISBN	0-08-101947-5
Edizione	[First edition.]
Descrizione fisica	1 online resource (1 volume) : illustrations
Disciplina	515/.642 512.5
Soggetti	Control theory Algebras, Linear
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Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Mathematical preliminaries -- Generalized inverse of matrix and solution of linear system equation -- Polynomial fraction description -- Stability -- Fundamental approaches to control system analysis -- Determination of finite and infinite frequency structure of a rational matrix -- The solution of a regular PMD and the set of impulsive free initial conditions -- A refined resolvent decomposition of a regular polynomial matrix and application to the solution of regular PMDs -- Frequency structures of generalized companion form and application to the solution of regular PMDs -- A generalized chain-scattering representation and its algebraic system properties -- Realization of behavior -- Related extensions to system well-posedness and internal stability -- Nonstandard H_∞ control problem : a generalized chain-scattering representation approach -- Internet congestion control : a linear multivariable control look.
Sommario/riassunto	A Generalized Framework of Linear Multivariable Control proposes a number of generalized models by using the generalized inverse of matrix, while the usual linear multivariable control theory relies on some regular models. The book supports that in H_∞ control, the linear fractional transformation formulation is relying on the inverse of the block matrix. If the block matrix is not regular, the H_∞

control does not apply any more in the normal framework. Therefore, it is very important to relax those restrictions to generalize the classical notions and models to include some non-regular cases. This book is ideal for scholars, academics, professional engineer and students who are interested in control system theory. Presents a comprehensive set of numerical procedures, algorithms, and examples on how to deal with irregular models Provides a summary on generalized framework of linear multivariable control that focuses on generalizations of models and notions Introduces a number of generalized models by using the generalized inverse of matrix
