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Titolo	A generalized framework of linear multivariable control / / Liansheng Tan
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ISBN	9780081019474 0081019475
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Descrizione fisica	1 online resource (1 volume) : illustrations
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Soggetti	Control theory Algebras, Linear
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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 [infinity symbol] 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-infinity control, the

linear fractional transformation formulation is relying on the inverse of the block matrix. If the block matrix is not regular, the H-infinity 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