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Nota di contenuto	Introduction -- Mathematical Modelling of Real Physical System -- Control Oriented Linear Fractional Transformation -- Synthesis Based H Control Theory -- Generalized Control Oriented LFT Modelling of a Coupled Uncertain MIMO System -- Control-Oriented LFT Modelling of a Two-DOF Spring- Mass-Dashpot Dynamic System -- Control Oriented LFT Modelling and H Control of Twin Rotor MIMO System -- Control Oriented LFT Modelling and H Control of Differentially Driven Wheeled Mobile Robot -- Control Oriented LFT Modelling and H Control of Differentially Driven Wheeled Mobile Robot with Slip Dynamics.
Sommario/riassunto	This book covers a new paradigm of system modeling – the robust control-oriented linear fractional transformation (LFT) modeling. A dynamic system expressed in LFT modeling framework paves the way for the application of modern robust controller design technique like -synthesis method for controller design. This book covers the generalized robust control-oriented LFT modeling representation of the MIMO system depending upon the uncertainty structure, system dynamics, and the dimensions of the input–output. The modeling framework results into a compact and manageable representation of uncertainty modeling in the form of feedback-like structure that is suitable for design and implementation of the robust control technique like -synthesis-based H control theory. This book also describes the

application of the proposed methodology in a variety of advanced mechatronic systems like the Twin Rotor MIMO system, wheeled mobile robot, and an industrial robot arm.