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Titolo	Linear Time-Invariant Systems, Behaviors and Modules [[electronic resource] /] / by Ulrich Oberst, Martin Scheicher, Ingrid Scheicher
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ISBN	3-030-43936-4
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Descrizione fisica	1 online resource (xi, 750 pages)
Collana	Differential-Algebraic Equations Forum, , 2199-7497
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Soggetti	Matrix theory Algebra Topology Fourier analysis Partial differential equations Differential equations Linear and Multilinear Algebras, Matrix Theory Fourier Analysis Partial Differential Equations Ordinary Differential Equations
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1. A Survey of the Book's Content -- 2. The Language and Fundamental Properties of Behaviors -- 3. Observability, Autonomy and Controllability of Behaviors -- 4. Applications of the Chinese Remainder Theorem -- 5. Input/ Output Behaviors -- 6. Interconnections of Input/ Output Behaviors -- 7. The Transfer Matrix as Operator or Input/ Output Map -- 8. Stability via Quotient Modules -- 9. Compensators -- 10. Observers -- 11. Canonical State Space Realizations -- 12. Generalized Fractional Calculus.
Sommario/riassunto	This book comprehensively examines various significant aspects of linear time-invariant systems theory, both for continuous-time and discrete-time. Using a number of new mathematical methods it provides complete and exact proofs of all the systems theoretic and electrical engineering results, as well as important results and

algorithms demonstrated with nontrivial computer examples. The book is intended for readers who have completed the first two years of a university mathematics course. All further mathematical results required are proven in the book.