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	Titolo	Introduction to Infinite-Dimensional Systems Theory [[electronic resource]] : A State-Space Approach / / by Ruth Curtain, Hans Zwart
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	Nota di contenuto	Introduction -- Semigroup Theory -- Classes of Semigroups -- Stability -- The Cauchy Problem -- State Linear Systems -- Input-Output Maps -- Stabilizability and Detectability -- Linear Quadratic Optimal Control -- Boundary Control Systems -- Existence and Stability for Semilinear Differential Equations -- Appendix.
	Sommario/riassunto	Infinite-dimensional systems is a well established area of research with an ever increasing number of applications. Given this trend, there is a need for an introductory text treating system and control theory for this class of systems in detail. This textbook is suitable for courses focusing on the various aspects of infinite-dimensional state space theory. This book is made accessible for mathematicians and post-graduate engineers with a minimal background in infinite-dimensional system theory. To this end, all the system theoretic concepts introduced throughout the text are illustrated by the same types of examples, namely, diffusion equations, wave and beam equations, delay equations and the new class of platoon-type systems. Other commonly met distributed and delay systems can be found in the exercise sections. Every chapter ends with such a section, containing about 30 exercises testing the theoretical concepts as well. An extensive account of the mathematical background assumed is