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Titolo	Time-Delay Systems : Lyapunov Functionals and Matrices / / by Vladimir Kharitonov
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Soggetti	Control engineering System theory Dynamics Ergodic theory Computational intelligence Applied mathematics Engineering mathematics Control and Systems Theory Systems Theory, Control Dynamical Systems and Ergodic Theory Computational Intelligence Mathematical and Computational Engineering Applications of Mathematics
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Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Preface.- Notations and Symbols.- Part I: Delay Type Systems -- 1 General Theory. 2 Single Delay Case.- 3 Multiple Delay Case. - 4 Systems with Distributed Delay.- Part II: Neutral Type Systems. - 5 General Theory.- 6 Linear Systems.- 7 Distributed Delay Case -- References -- Subject Index.
Sommario/riassunto	Stability is one of the most studied issues in the theory of time-delay

systems, but the corresponding chapters of published volumes on time-delay systems do not include a comprehensive study of a counterpart of classical Lyapunov theory for linear delay free systems. The principal goal of the book is to fill this gap, and to provide readers with a systematic and exhaustive treatment of the basic concepts of the Lyapunov-Krasovskii approach to the stability analysis of linear time-delay systems. The book is organized into two parts. The first part is dedicated to the case of retarded type time-delay systems; it consists of four chapters, which respectively deal with results concerning the existence and uniqueness of the solutions of an initial value problem, the class of linear systems with one delay, the case of systems with several delays, and the case of systems with distributed delays. The second part of the book studies the case of neutral type time-delay systems, containing three chapters that extend the results presented earlier in the book to neutral time-delay systems and treating special classes of linear time-delay systems. Time-Delay Systems: Lyapunov Functionals and Matrices will be of great use and interest to researchers and graduate students in automatic control and applied mathematics as well as practicing engineers involved in control system design.
