

The purpose of this book is the study of signals and deterministic, linear, time-invariant, finite and causal dimension systems. A set of practical tools is presented for automatic and signal processing. Methods of representation of dynamic linear systems and the analysis of their behavior are put forward. The identification and synthesis of control laws for stabilization and regulation is then discussed.

The study of characteristic signal properties and systems, and knowledge of mathematical tools and treatment methods and analysis are of increasing importance, and continue to evolve. The reason for this is that the current state of technology, in particular electronics and computing, enables the production of increasingly advanced and effective processing systems which are becoming less and less expensive, despite their complexity. The aims and requirements of these systems generally depends on their applications, and this book discusses an application in home assistance: the NAO robot.

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