

1. Record Nr.	UNICAMPANIAVAN00113764
Titolo	Self-oscillations in dynamic systems : a new methodology via two-relay controllers / Luis T. Aguilar ... [et al.]
Pubbl/distr/stampa	[Cham], : Birkhäuser, : Springer, 2015
Titolo uniforme	Self-oscillations in dynamic systems : a new methodology via two-relay controllers
Descrizione fisica	XIV, 158 p. ; 24 cm
Soggetti	34C25 - Periodic solutions to ordinary differential equation [MSC 2020] 34D20 - Stability of solutions to ordinary differential equation [MSC 2020] 93B12 - Variable structure systems [MSC 2020] 93C10 - Nonlinear systems in control theory [MSC 2020] 93C80 - Frequency-response methods in control theory [MSC 2020]
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	This monograph presents a simple and efficient two-relay control algorithm for generation of self-excited oscillations of a desired amplitude and frequency in dynamic systems. Developed by the authors, the two-relay controller consists of two relays switched by the feedback received from a linear or nonlinear system, and represents a new approach to the self-generation of periodic motions in underactuated mechanical systems. The first part of the book explains the design procedures for two-relay control using three different methodologies – the describing-function method, Poincaré maps, and the locus-of-a perturbed-relay-system method – and concludes with stability analysis of designed periodic oscillations. Two methods to ensure the robustness of two-relay control algorithms are explored in the second part, one based on the combination of the high-order sliding mode controller and backstepping, and the other on higher-order sliding-modes-based reconstruction of uncertainties and their compensation where Lyapunov-based stability analysis of tracking error is used. Finally, the third part illustrates applications of self-

oscillation generation by a two-relay control with a Furuta pendulum, wheel pendulum, 3-DOF underactuated robot, 3-DOF laboratory helicopter, and fixed-phase electronic circuits. Self-Oscillations in Dynamic Systems will appeal to engineers, researchers, and graduate students working on the tracking and self-generation of periodic motion of electromechanical systems, including non-minimum-phase systems. It will also be of interest to mathematicians working on analysis of periodic solutions.

2. Record Nr.	UNICAMPANIAVAN00115287
Autore	Aljandali, Abdulkader
Titolo	Quantitative analysis and IBM® SPSS® statistics : a guide for business and finance / Abdulkader Aljandali
Pubbl/distr/stampa	[Cham], : Springer, 2016
Titolo uniforme	Quantitative analysis and IBM® SPSS® statistics
Descrizione fisica	XXI, 184 p. : ill. ; 24 cm
Soggetti	62-XX - Statistics [MSC 2020] 62P05 - Applications of statistics to actuarial sciences and financial mathematics [MSC 2020] 62P20 - Applications of statistics to economics [MSC 2020]
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia