1. Record Nr. UNINA9910863137203321

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Titolo	Adaptronics – Smart Structures and Materials / / by Johannes Michael Sinapius
Pubbl/distr/stampa	Springer Berlin Heidelberg, 2021 Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer Vieweg, , 2021
ISBN	3-662-61399-9
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (472 pages)
Disciplina	624.1
Soggetti	Control engineering Robotics Mechatronics Engineering—Materials Electronics Microelectronics Control, Robotics, Mechatronics Materials Engineering Electronics and Microelectronics, Instrumentation
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Introduction -- Principles of adaptronics -- Functional materials -- Adaptronic functional elements -- active shape control -- Active vibration control -- Control of adaptive structures -- Active noise control -- Integrated component monitoring. .
Sommario/riassunto	Adaptronics is a comparatively recent discipline of engineering sciences, which is characterized by a pronounced interdisciplinarity. The present book therefore offers an interdisciplinary view of adaptronic systems. Starting from the basic principles and variants of adaptronic systems as well as the functional materials, the different functional elements are explained. Subsequently, the gained knowledge is applied and deepened in the fields of active shape control, active vibration control and active vibroacoustics. A focus is thereby placed on

current examples from research. The content introduction - principles of adaptronics - functional materials - adaptronic functional elements - active shape control - active vibration control - control of adaptive structures - active noise control - integrated component monitoring. The target groups The book is aimed at students of engineering sciences and at practitioners in industry. The author Michael Sinapius received his doctorate at RWTH Aachen University and has been a scientist at the German Aerospace Center since 1989. From 2003 to 2011 he was professor for adaptive lightweight design at the Otto-von-Guericke University in Magdeburg. Since 2011 he is professor for adaptronic systems at the Technische Universität Braunschweig and holds the chair of the Institute for Adaptronics and Function Integration.