

1. Record Nr.	UNINA9910464331303321
Titolo	Embodying intelligence in structures and integrated systems : selected, peer reviewed papers from CIMTEC 2012 - 4th International Conference on Smart Materials, Structures and Systems, June 10-14, 2012, Terme, Italy // edited by Pietro Vincenzini, Fabio Casciati and Piervincenzo Rizzo
Pubbl/distr/stampa	Stafa-Zuerich : , : Trans Tech, , [2013] ©2013
ISBN	3-908158-91-5
Descrizione fisica	1 online resource (253 p.)
Collana	Advances in science and technology ; ; 83
Altri autori (Persone)	VincenziniP. <1939-> CasciatiFabio RizzoPiervincenzo
Disciplina	620.11
Soggetti	Smart materials Smart structures Electronic books.
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Vol. 7 of 10 volumes from the 4th International Conference "Smart Materials, Structures and Systems".
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Embodying Intelligence in Structures and Integrated Systems; Preface and Committees; Table of Contents; Chapter 1: Smart Materials, Sensors, Actuators, MEMS; Report on the 2011 off the Pacific Coast of Tohoku Earthquake: Its Impact, and Control/Monitoring Performances; Development of some Smart Sensors for Monitoring Civil Infrastructures; Fatigue of NiTi for Dampers and Actuators; On Characteristic Properties of a Layered Packet Base-Foundation on the Base of the Analysis of the Solutions of the Corresponding Three-Dimensional Dynamic Problems of Elasticity Theory Chapter 2: Integration Technologies Model Order Reduction Issues for Integrated Structural Control Design; A Mathematical Framework for Structural Control Integration; Insight and Applications in Energy Harvesting from Bullets to Birds; A Fractal-Inspired Multi-Frequency Piezoelectric Energy Converter: Design and Experimental

Characterization; Chapter 3: Smart Structures and Integrated Systems; Seismic Protection of Structures Using Tuned Mass Dampers with Resettable Variable Stiffness; Mechanics and Model Based Control Vibration-Based Damage Detection under Changing Environmental and Operational Conditions Monitoring, Evaluation and Control for Life-Cycle Performance of Intelligent Civil Structures; High Precision Adaptive Space Structures; Deployable Structures; SHM System for Monitoring and Prediction of Cracks Development in Concrete Structures; Smart Composite Device for Structural Health Monitoring; Real-Time Smart Abstract Shape Identifiers; Safety Assessment of Bridge Structures Using Ambient Vibration; Chapter 4: Structural Health Monitoring and Control
Digital Wireless Solutions for Structural Control Structural Control Issues in New Generation Offshore Wind Energy Plants; Structural Health Monitoring of a Tall Building with Huge Floating Platform; Development of a Visualized Data Management System for Life-Cycle Health Monitoring of Civil Structures; Ultrasonic Guided Wave Monitoring of Railroad Tracks; NDE/SHM of Underwater Structures: A Review; Magnetic Flux Leakage Sensing-Based Steel Cable NDE Technique Incorporated on a Cable Climbing Robot for Bridge Structures
Sensor Location Analysis in Nonlinear Acoustics Used for Damage Detection in Composite Chiral Sandwich Panels A Comparative Assessment of Two SHM Damage Detection Methods in a Laboratory Tower; Keywords Index; Authors Index

Sommario/riassunto

The 27 peer-reviewed papers collected here together offer a plenitude of up-to-date information on "Embodiment Intelligence in Structures and Integrated Systems". The papers are conveniently arranged into: Chapter 1: Smart Materials, Sensors, Actuators, MEMS, Chapter 2: Integration Technologies, Chapter 3: Smart Structures and Integrated Systems, Chapter 4: Structural Health Monitoring and Control. Review from Book News Inc.: Approximately 800 papers selected from the conference are published in 10 volumes, each documenting a symposium. This seventh volume is edited by Peitro Vincenzini, Fabio C
