

1. Record Nr.	UNINA9910557535403321
Autore	Morozov Oleg G
Titolo	Fiber Bragg Grating Based Sensors and Systems
Pubbl/distr/stampa	Basel, Switzerland, : MDPI - Multidisciplinary Digital Publishing Institute, 2021
Descrizione fisica	1 online resource (228 p.)
Soggetti	Research and information: general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Sommario/riassunto	<p>This book is a collection of papers that originated as a Special Issue, focused on some recent advances related to fiber Bragg grating-based sensors and systems. Conventionally, this book can be divided into three parts: intelligent systems, new types of sensors, and original interrogators. The intelligent systems presented include evaluation of strain transition properties between cast-in FBGs and cast aluminum during uniaxial straining, multi-point strain measurements on a containment vessel, damage detection methods based on long-gauge FBG for highway bridges, evaluation of a coupled sequential approach for rotorcraft landing simulation, wearable hand modules and real-time tracking algorithms for measuring finger joint angles of different hand sizes, and glaze icing detection of 110 kV composite insulators. New types of sensors are reflected in multi-addressed fiber Bragg structures for microwave-photonic sensor systems, its applications in load-sensing wheel hub bearings, and more complex influence in problems of generation of vortex optical beams based on chiral fiber-optic periodic structures. Original interrogators include research in optical designs with curved detectors for FBG interrogation monitors; demonstration of a filterless, multi-point, and temperature-independent FBG dynamical demodulator using pulse-width modulation; and dual wavelength differential detection of FBG sensors with a pulsed DFB laser.</p>

2. Record Nr.	UNINA9910483670403321
Autore	Figliola Angelo
Titolo	Post-industrial robotics : exploring informed architecture // Angelo Figliola, Alessandra Battisti
Pubbl/distr/stampa	Singapore : , : Springer Singapore : , : Imprint : Springer, , 2021
ISBN	981-15-5278-9
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource : illustrations (chiefly color)
Disciplina	720.105
Soggetti	Architecture - Innovations Architecture - Technological innovations Robotics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Computational design and innovative production methods -- Post-industrial robotics: analysis of case studies to explore informed architecture -- Performative architecture and clay materials. Overview of the main research paths in the European context -- Harvard Gsd, Ceramic Shading System -- Harvard Ggsd, Flowing Matter -- Harvard Gsd, Revolving Brick -- Harvard Gsd, Woven clay -- CODESIGNLAB , Ceramica Performativa -- TU Delft, Informed materiality -- Performative architecture and wood materials. Overview of the main research paths in the European context -- ICD, Research Pavilion 2011 -- ETH, The sequantial roof -- ETH, Topology optimization -- AA , WoodChip Burn -- ICD, Robotic Softness -- ICD, Graded Light in Aggregate Structures -- Performative architecture and plastic materials. Overview of the main research paths in the European context -- ETH, Acoustic bricks -- ETH, Mesh mould -- TU Delft, Additive manufacturing for acoustic -- TU Delft, Additive Manufacturing for daylight -- MIT, Robotics Enabled Stress Line -- Solar bytes Pavilion -- Graz University of Technology, D-FORM -- AA, Automated Robotic Fabrication -- Fab Union, Light Vault -- Trivoc -- TU Delft, Informed porosity -- Performative architecture and metal materials. Overview of the main research paths in the European context -- Virginia Tech, Automating eclips -- Performative architecture and fiber materials. Overview of the main research paths in the European context -- ICD,

Research Pavilion 2013-2014 -- ICD, Research Pavilion 2014-2015 -- ICD, Research Pavilion 2016-2017 -- Feedback on the design processes for the realization of informed architectures.

Sommario/riassunto

This book highlights the concept of informed architecture as an alternative to performance-based approaches. Starting with an analysis of the state of art, the book defines an operative methodology in which performative parameters lead to the generation of the shape becoming the design's input, rather than being mere quantitative parameters. It then uses case studies to investigate the methodology. Lastly, the book discusses a novel way of conceiving and using the manufacturing tool, which is the basis for the definition of informed architectures in relation to data usage and the optimization process.
