

1. Record Nr.	UNINA9910141191803321
Titolo	Fiber optic sensors : an introduction for engineers and scientists // edited by Eric Udd, William B.Spillman, Jr
Pubbl/distr/stampa	Hoboken, New Jersey : , : John Wiley & Sons, , 2011 [Piscataqay, New Jersey] : , : IEEE Xplore, , [2011]
ISBN	1-118-01408-1 1-118-01410-3 1-118-01409-X
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (514 p.)
Altri autori (Persone)	UddEric SpillmanWilliam B
Disciplina	681.25 681/.25
Soggetti	Fiber optics Optical fiber detectors
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Includes index.
Nota di contenuto	Preface. -- About the Authors. -- Contributors. -- 1 The Emergence of Fiber Optic Sensor Technology (Eric Udd). -- 2 Optical Fibers (Daniel A. Nolan, Paul E. Blaszyk, and Eric Udd). -- 3 Light Sources (Eric Udd). -- 4 Optical Detectors (William B. Spillman, Jr.). -- 5 Optical Modulators for Fiber Optic Sensors (Leonard M. Johnson). -- 6 Intensity-Based and Fabry / Perot Interferometer Sensors (Gordon L. Mitchell). -- 7 Multimode Grating Sensors (William B. Spillman, Jr.). -- 8 Multimode Polarization Sensors (William B. Spillman, Jr.). -- 9 Fiber Optic Sensors Based on the Sagnac Interferometer and Passive Ring Resonator (Eric Udd). -- 10 Fiber Optic Sensors Based on the Mach / Zehnder and Michelson Interferometers (Anthony Dandridge). -- 11 Distributed and Multiplexed Fiber Optic Sensors (Alan D. Kersey). -- 12 Fiber Optic Magnetic Sensors (Frank Bucholtz). -- 13 Industrial Applications of Fiber Optic Sensors (John W. Berthold III). -- 14 Fiber Optic Smart Structures (Eric Udd). -- 15 Fiber Grating Sensors (Eric Udd). -- 16 Fiber Optic Biosensors (William B. Spillman, Jr.). -- Index.
Sommario/riassunto	"Since the technology has moved strongly into a number of different

areas a textbook of this sort could be used by a wide variety of academic departments including physics, electrical engineering, mechanical engineering, civil engineering, aerospace engineering and bioengineering. To make the second edition as widely appealing as possible a series of significant upgrades are planned. 1. The book will be structured to support a variety of academic programs 2. Fundamental components and optical concepts will be supported by a new chapter on sensor concepts and upgrades/updates of the chapters on optical fiber, light sources, detectors and modulators. 3. Each of the existing fiber optic sensor chapters will be updated with major upgrades of the fiber etalon and intensity sensor based chapter that will split into two. A new chapter will be introduced on fiber grating sensors and Brillouin distributed sensing. 4. The "application" chapters of the first edition will be updated and new application chapters introduced on fiber biosensors and fiber optic civil structures. The fiber optic smart structure chapter will be extensively rewritten. 5. Questions will be added to the chapters that will serve to support traditional undergraduate and graduate level courses"--

"The book will be structured to support a variety of academic programs"--
