1. Record Nr. UNINA9910300435103321

Autore	Donges Axel
Titolo	Laser Measurement Technology : Fundamentals and Applications / / by Axel Donges, Reinhard Noll
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2015
ISBN	3-662-43634-5
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (XIV, 422 p. 338 illus., 18 illus. in color.)
Collana	Springer Series in Optical Sciences, , 0342-4111 ; ; 188
Disciplina	621.366
Soggetti	Lasers Photonics Physical measurements Measurement Microwaves Optical engineering Optics Electrodynamics Physics Optics, Lasers, Photonics, Optical Devices Measurement Science and Instrumentation Microwaves, RF and Optical Engineering Classical Electrodynamics Applied and Technical Physics
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Introduction -- Properties of Laser Radiation -- Interaction of Laser Radiation and Matter -- Beam Shaping and Guiding -- Detection of Electromagnetic Radiation -- Laser Interferometry -- Holographic Interferometry -- Speckle Metrology -- Optical Coherence Tomography -- Laser Triangulation -- Laser Doppler Methods -- Confocal Measurement Systems -- Laser Spectroscopy -- Laser-Induced Fluorescence.
Sommario/riassunto	Laser measurement technology has evolved in the last years in a

versatile and reflationary way. Today, its methods are indispensable for research and development activities as well as for production technology. Every physicist and engineer should therefore gain a working knowledge of laser measurement technology. This book closes the gap of existing textbooks. It introduces in a comprehensible presentation laser measurement technology in all its aspects. Numerous figures, graphs and tables allow for a fast access into the matter. In the first part of the book the important physical and optical basics are described being necessary to understand laser measurement technology. In the second part technically significant measuring methods are explained and application examples are presented. Target groups of this textbook are students of natural and engineering sciences as well as working physicists and engineers, who are interested to make themselves familiar with laser measurement technology and its fascinating potentials.