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Descrizione fisica	1 online resource (XXIII, 325 p. 143 illus., 102 illus. in color.)
Disciplina	530.8 530.7
Soggetti	Measurement Measuring instruments Atoms Metrology Optical measurements Quantum theory Nanotechnology Measurement Science and Instrumentation Metrology and Fundamental Constants Optical Metrology Quantum Measurement and Metrology Nanometrology
Lingua di pubblicazione	Inglese
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Livello bibliografico	Monografia
Nota di contenuto	International System of Units -- Knowing metrology and its international structure -- Statistics applied to metrology -- Measurement systems -- Evaluating of measure uncertainty in direct measurements -- Evaluating of measure uncertainty in indirect measurements -- Industrial calibration -- Measurement uncertainty and conformity assessment -- Critical analysis of calibration certificates.
Sommario/riassunto	This book presents in a clear, didactic, and straightforward manner, the concepts, tools and technical terminology needed to understand metrological issues in industry and laboratories. Using examples of

calibration and detailed critical analysis of the certificates, the book explores metrology and measurement uncertainty, both concepts and applications; mathematical foundations, statistical tools, techniques, practices, and the operational procedures that make up metrology. The text is based on the most recent editions of the International Vocabulary of Metrology, the International System of Units and the Guide to the Expression of Measurement Uncertainty. Reinforces concepts presents with examples, exercises, and end of chapter solved exercises Analyzes the history of measurement and units of measure, ending with a discussion of the International System of Units Explains types of uncertainty and how to estimate value, considering the measurement carried out directly and indirectly.