1. Record Nr. UNINA9910739424603321

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Titolo	Evaluating measurement accuracy : a practical approach / / Semyon G. Rabinovich
Pubbl/distr/stampa	New York, : Springer, 2013
ISBN	1-4614-6717-9
Edizione	[2nd ed.]
Descrizione fisica	1 online resource (323 p.)
Disciplina	530 530.8 620.11 658.56
Soggetti	Measurement Metrology
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	General Concepts in the Theory of Measurements -- Measuring Instruments and Their Properties -- Statistical Methods for Experimental Data Processing -- Direct Measurements -- Indirect Measurements -- Combined and Simultaneous Measurements -- Combining the Results of Measurements -- Examples of Measurements and Measurement Data Processing -- The International Vocabulary of Metrology and the Guide to the Expression of Uncertainty in Measurement – Analysis, Criticism, and Recommendations.
Sommario/riassunto	The goal of Evaluating Measurement Accuracy: A Practical Approach is to present methods for estimating the accuracy of measurements performed in industry, trade, and scientific research. From developing the theory of indirect measurements to proposing new methods of reduction, transformation, and enumeration, this work encompasses the full range of measurement data processing. It includes many examples that illustrate the application of general theory to typical problems encountered in measurement practice. As a result, the book serves as an inclusive reference work for data processing of all types of measurements: single and multiple, combined and simultaneous, direct (both linear and nonlinear), and indirect (both dependent and

independent). It is a working tool for experimental scientists and engineers of all disciplines who work with instrumentation. It is also a good resource for natural science and engineering students and for technicians performing measurements in industry. A key feature of the book is a new general theory of measurements that is both well-grounded and oriented towards real-life needs of measurement practitioners. Although the traditional theory focuses on multiple measurements, single measurements are the ones most commonly used. This book presents methods for evaluating accuracy of single measurements and answers other fundamental questions not addressed adequately by the traditional theory, such as how to combine various components o f measurement inaccuracy when evaluating the complete uncertainty of a measurement result. For its second edition, the book adds significant new material to incorporate recent metrological developments and expand coverage, including: · The new method of enumeration of experimental data processing for independent indirect multiple measurements which is precise and does not rely on questionable assumptions. · The analysis of reliability of estimates of statistical parameters of samples from a normal distribution. · A significantly expanded analysis of two fundamental documents in modern metrology, the International Vocabulary of Metrology and the Guide to the Expression of Uncertainty in Measurement. · Completely rewritten sections devoted to accuracy of a single measurement taken with a chain of instruments and the Monte Carlo method.