

1. Record Nr.	UNINA9910300557903321
Autore	Kaloyerou Panayiotis Nicos
Titolo	Basic Concepts of Data and Error Analysis : With Introductions to Probability and Statistics and to Computer Methods // by Panayiotis Nicos Kaloyerou
Pubbl/distr/stampa	Cham : , : Springer International Publishing : , : Imprint : Springer, , 2018
ISBN	3-319-95876-3
Edizione	[1st ed. 2018.]
Descrizione fisica	1 online resource (XX, 259 p. 405 illus., 42 illus. in color.)
Disciplina	511.43
Soggetti	Physical measurements Measurement Statistics Field theory (Physics) Applied mathematics Engineering mathematics Measurement Science and Instrumentation Statistics for Engineering, Physics, Computer Science, Chemistry and Earth Sciences Classical and Continuum Physics Mathematical and Computational Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Units of Measurement -- Scientific Calculations, Significant Figures and Graphs -- Error Analysis -- The Method of Least Squares -- Theoretical Background - Probability and Statistics -- Use of Computers -- A: Bibliography -- B: Tables -- C: Some Mathematical Formulae and Relations -- D: Some Biographies -- E: Solutions.
Sommario/riassunto	This introductory textbook explains the concepts and methods of data and error analysis needed for laboratory experiment write-ups, especially physics and engineering experiments. The book contains the material needed for beginning students, e.g., first year university students, college students (enrolled on a certificate or diploma course) and even A-level students. Nevertheless, it also covers the required

material for higher year university laboratories, including the final year. Only essential concepts and methods needed for the day-to-day performance of experiments and their subsequent analysis and presentation are included and, at the same time, presented as simply as possible. Non-essential detail is avoided. Chapter five is a stand-alone introduction to probability and statistics aimed at providing a theoretical background to the data and error analysis chapters one to four. Computer methods are introduced in Chapter six. The author hopes this book will serve as a constant reference.

---