

1. Record Nr.	UNINA9910437910803321
Autore	Laudanski Ludomir M
Titolo	Between certainty and uncertainty : statistics and probability in five units with notes on historical origins and illustrative numerical examples / / Ludomir M. Laudanski
Pubbl/distr/stampa	Heidelberg, : Springer, 2013
ISBN	9783642256974 364225697X
Edizione	[1st ed. 2013.]
Descrizione fisica	1 online resource (313 p.)
Collana	Intelligent systems reference library, , 1868-4394 ; ; v. 31
Disciplina	519.02/462 519.02462
Soggetti	Statistics Statistics - History
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	bk. 1. Theory -- bk. 2. Exercises.
Sommario/riassunto	„Between Certainty & Uncertainty” is a one-of-a-kind short course on statistics for students, engineers and researchers. It is a fascinating introduction to statistics and probability with notes on historical origins and 80 illustrative numerical examples organized in the five units: . . . Chapter 1 Descriptive Statistics: Compressing small samples, basic averages - mean and variance, their main properties including God’s proof; linear transformations and z-scored statistics . . . Chapter 2 Grouped data: Udny Yule’s concept of qualitative and quantitative variables. Grouping these two kinds of data. Graphical tools. Combinatorial rules and qualitative variables. Designing frequency histogram. Direct and coded evaluation of quantitative data. Significance of percentiles. . . Chapter 3 Regression and correlation: Geometrical distance and equivalent distances in two orthogonal directions as a prerequisite to the concept of two regression lines. Misleading in interpreting two regression lines. Derivation of the two regression lines. Was Hubble right? Houbolt’s cloud. What in fact measures the correlation coefficient? . . . Chapter 4 Binomial distribution: Middle ages origins

of the binomials; figurate numbers and combinatorial rules. Pascal's Arithmetical Triangle. Bernoulli's or Poisson Trials? John Arbuthnot curing binomials. How Newton taught S. Pepys probability. Jacob Bernoulli's Weak Law of Large Numbers and others. . . Chapter 5 Normal distribution and binomial heritage – Tables of the normal distribution. Abraham de Moivre and the second theorem of de Moivre-Laplace. . .
