

1. Record Nr.	UNINA9911019901403321
Autore	Hahn Gerald J
Titolo	Statistical intervals [[electronic resource]] : a guide for practitioners // Gerald J. Hahn, William Q. Meeker
Pubbl/distr/stampa	New York, : Wiley, c1991
ISBN	1-283-29449-4 9786613294494 0-470-31677-2 0-470-31744-2
Descrizione fisica	1 online resource (422 p.)
Collana	Wiley series in probability and mathematical statistics. Applied probability and statistics
Altri autori (Persone)	MeekerWilliam Q
Disciplina	519.5
Soggetti	Mathematical statistics Statistics
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 indexes.
Nota di contenuto	Statistical Intervals: A Guide for Practitioners; Contents; 1. Introduction, Basic Concepts, and Assumptions; 1.1. Statistical Inference; 1.2. Different Types of Statistical Intervals: An Overview; 1.3. The Assumption of Sample Data; 1.4. The Central Role of Practical Assumptions Concerning "Representative Data"; 1.5. Enumerative versus Analytic Studies; 1.6. Basic Assumptions for Enumerative Studies; 1.7. Additional Aspects of Analytic Studies; 1.8. Convenience and Judgment Samples; 1.9. Sampling People; 1.10. Infinite Population Assumptions; 1.11. Practical Assumptions: Overview 1.12. Practical Assumptions: Further Example1.13. Planning the Study; 1.14. The Role of Statistical Distributions; 1.15. The Interpretation of a Statistical Interval; 1.16. Comments Concerning Subsequent Discussion; 2. Overview of Different Types of Statistical Intervals; 2.1. Choice of a Statistical Interval; 2.2. Confidence Intervals; 2.3. Prediction Intervals; 2.4. Statistical Tolerance Intervals; 2.5. Which Statistical Interval Do I Use?; 2.6. Choosing a Confidence Level; 2.7. Statistical Intervals versus Significance Tests 3. Constructing Statistical Intervals Assuming a Normal Distribution Using Simple Tabulations3.1. Introduction; 3.2. Numerical Example;

3.3. Two-Sided Statistical Intervals; 3.4. One-Sided Statistical Bounds;
4. Methods for Calculating Statistical Intervals for a Normal Distribution; 4.1. Introduction; 4.2. Confidence Interval for the Mean of a Normal Distribution; 4.3. Confidence Interval for the Standard Deviation of a Normal Distribution; 4.4. Confidence Interval for a Percentile of a Normal Distribution; 4.5. Confidence Interval for the Proportion Less (Greater) than a Specified Value
4.6. Statistical Tolerance Intervals to Contain a Proportion of a Population
4.7. Prediction Interval to Contain a Single Future Observation or the Mean of m Future Observations; 4.8. Prediction Interval to Contain All of m Future Observations; 4.9. Prediction Interval to Contain the Standard Deviation of m Future Observations; 4.10. The Assumption of a Normal Distribution; 4.11. Assessing Distribution Normality and Dealing with Nonnormality; 4.12. Inferences from Transformed Data; 5. Distribution-Free Statistical Intervals; 5.1. Introduction
5.2. Distribution-Free Confidence Intervals for a Percentile
5.3. Distribution-Free Tolerance Intervals and Bounds to Contain a Specified Percentage of a Population; 5.4. Distribution-Free Prediction Intervals to Contain at Least k of m Future Observations; 5.5. Prediction Intervals to Contain a Specified Ordered Observation in a Future Sample; 6. Statistical Intervals for Proportions and Percentages (Binomial Distribution); 6.1. Introduction; 6.2. Confidence Intervals for the (True) Proportion Nonconforming in the Sampled Population (or Process)
6.3. Confidence Intervals for the Probability That the Number of Nonconforming Units in a Future Sample is Less Than or Equal to (or Greater than) a Specified Number

Sommario/riassunto

Presents a detailed exposition of statistical intervals and emphasizes applications in industry. The discussion differentiates at an elementary level among different kinds of statistical intervals and gives instruction with numerous examples and simple math on how to construct such intervals from sample data. This includes confidence intervals to contain a population percentile, confidence intervals on probability of meeting specified threshold value, and prediction intervals to include observation in a future sample. Also has an appendix containing computer subroutines for nonparametric stati
