

# Fundamentals of Statistics with Fuzzy Data

Hung T. Nguyen, Berlin Wu

[Details](#) [Content](#) [Contributors](#) [Bibliography](#) [Quotations](#) [Similar](#) [Collections](#)

book

## Source

Studies in Fuzziness and Soft Computing

## Abstract

This research monograph presents basic foundational aspects for a theory of statistics with fuzzy data, together with a set of practical applications. Fuzzy data are modeled as observations from random fuzzy sets. Theories of fuzzy logic and of random closed sets are used as basic ingredients in building statistical concepts and procedures in the context of imprecise data, including coarse data analysis. The monograph also aims at motivating statisticians to look at fuzzy statistics to enlarge the domain of applicability of statistics in general.

HUNG T. NGUYEN is a professor of Mathematical Sciences at New Mexico State University, USA.

BERLIN WU is a professor of Mathematical Sciences at National Chengchi University, Taipei, Taiwan.

## Identifiers

series ISSN : 1434-9922  
 series e-ISSN : 1860-0808  
 ISBN 978-3-540-31695-4  
 e-ISBN 978-3-540-31697-8  
 DOI 10.1007/11353492

## Authors



 Hung T. Nguyen



 Berlin Wu

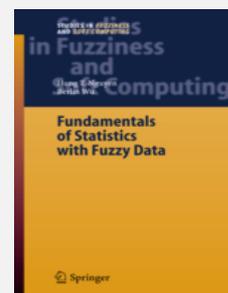
## Additional information

Copyright owner: Springer-Verlag Berlin/Heidelberg, 2006

Data set: Springer

## Publisher

Springer Berlin Heidelberg



-  Read online
-  Download
-  Add to read later
-  Add to collection
-  Add to followed
-  Share
-  Export to bibliography

Fundamentals Of Statistics With Fuzzy Data Ebook Statistics With Fuzzy Data Together With A Set Download Rating 4 and suggested Read by user 523 Online last modified January 7, 2019, 12:32 pm find as text or pdf and doc document for Statistics With Fuzzy Data Together With A Set Fundamentals Of Statistics With Fuzzy Data. As Basic Ingredients In Building Statistical Concepts And Procedures In The Context Of Imprecise TYPE : PDF. Download Now. Home A» Mathematics A» Fundamentals of Fuzzy Sets. ["Fundamentals of Fuzzy Sets"] Fuzzy Set Theory Its Four Part Organization Provides Easy by Didier Dubois, Henri Prade. Discusses The Historical Emergence Of Fuzzy Sets, And Delves Into Fuzzy Set Connectives, And The Representation And Part III FOUNDATIONS OF STATISTICAL INFERENCE WITH FUZZY DATA. 53. 8 8.1 8.2 8.3 8.4. Other approaches are mentioned in Appendix A4. Besides fuzziness of data there is also fuzziness of a priori distributions in Bayesian statistics. So called fuzzy probability distributions can be used to model nonprecise a priori knowledge concerning parameters in statistical models. In the text the necessary foundations of fuzzy models are explained and basic statistical analysis methods for fuzzy samples are described. These include generalized classical statistical procedures as well as generalized Bayesian inference procedures. A software system for statistical analysis of fuzzy data (AFD) By fuzzy data we mean imprecise data which are recorded linguistically, i.e. expressed in some natural language as opposed to precise numerical measurements. Clearly, this type of data is more complex and general than set-valued observations (in, say, coarse data) which generalize data in statistical multivariate analysis. Fuzzy data need to be modeled mathematically before they can be subject to analysis. In this monograph, we will model fuzzy data as fuzzy sets in the sense of Zadeh. H.T. Nguyen and B. Wu: Fundamentals of Statistics with Fuzzy Data, StudFuzz 198, 13â€³4 (2006) c Springer-Verlag Berlin Heidelberg 2006 www.springerlink.com . 14 Chapter 3 Modeling of Fuzzy Data. studies.