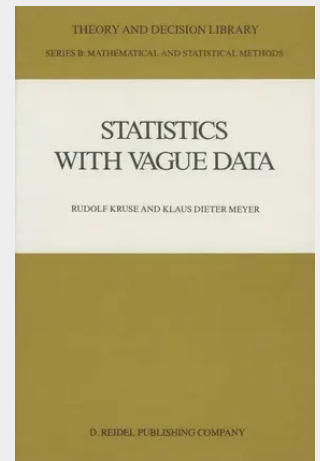


Statistics with Vague Data

This monograph is an attempt to unify existing works in the field of random sets, random variables, and linguistic random variables with respect to statistical analysis. It is intended to be a tutorial research compendium. The material of the work is mainly based on the postdoctoral thesis (Habilitationsschrift) of the first author and on several papers recently published by both authors. The methods form the basis of a user-friendly software tool which supports the statistical inference in the presence of vague data. Parts of the manuscript have been used in courses for graduate level students of mathematics and computer sciences held by the first author at the Technical University of Braunschweig. The textbook is designed for readers with an advanced knowledge of mathematics. The idea of writing this book came from Professor Dr. H. Skala. Several of our students have significantly contributed to its preparation. We would like to express our gratitude to Reinhard Elsner for his support in typesetting the book, Jorg Gebhardt and Jorg Knop for preparing the drawings, Michael Eike and Jiirgen Freckmann for implementing the programming system and Giinter Lehmann and Winfried Boer for proofreading the manuscript. This work was partially supported by the Fraunhofer-Gesellschaft. We are indebted to D. Reidel Publishing Company for making the publication of this book possible and would especially like to acknowledge the support which we received from our families on this project.

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