

[Lee, Kwang H.](#)

First course on fuzzy theory and applications. (English) [Zbl 1063.94129](#)

[Advances in Soft Computing](#). Berlin: Springer (ISBN 3-540-22988-4/pbk). x, 335 p. (2005).

This book aims to be an introductory textbook for fuzzy sets and their main applications. It covers the topics from basic notions for fuzzy sets and fuzzy relations up to fuzzy control and fuzzy systems up to fuzzified neural networks and fuzzified genetic algorithms, which is a good choice of topics.

Even granted that this is not a mathematical book, but an introductory text for engineers, I mean it is the worst book I ever had in my hands.

It is not only the very bad quality of its English which is unacceptable for a Springer book, and not only for a Springer book. It is a certain sort of carelessness which bothers me most. So e.g. members of a partition need not be nonempty by definition, this nonemptiness however is claimed as a fact later on; the definition of convexity for a set A in \mathbb{R}^n starts with the assumption “two arbitrary points s and r are defined in A ” which is not the antecedence of a conditional; there is a contradiction between the definition and a characterization of the strong inclusion for fuzzy sets (it seems the author mixes up the universal and the existential quantifier); for (crisp) relations f the notation $f(x)$ is introduced without demanding uniqueness; relations may contain properties (the latter a notion used only intuitively); in the case of ordering relations the asymmetry condition is called “antisymmetry”; etc. All these examples are taken from the first 70 pages.

So I cannot recommend this book to anybody.

Reviewer: [Siegfried J. Gottwald \(Leipzig\)](#)

MSC:

- [94D05](#) Fuzzy sets and logic (in connection with information, communication, or circuits theory)
- [94-01](#) Introductory exposition (textbooks, tutorial papers, etc.) pertaining to information and communication theory
- [93C42](#) Fuzzy control/observation systems
- [03E72](#) Theory of fuzzy sets, etc.
- [68T37](#) Reasoning under uncertainty in the context of artificial intelligence

Cited in **32** Documents

Keywords:

[fuzzy sets](#); [fuzzy relations](#); [fuzzy methods](#); [fuzzy control](#); [neural networks](#); [genetic algorithm](#)

Software:

[Genocop](#)