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**Uncertainty-Based Information.
Elements of Generalized Information Theory**

Lecture Notes in Fuzzy Mathematics and Computer Science 3.
Center for Research in Fuzzy Mathematics and Computer Science,
Creighton University, Omaha, Nebraska 68178 USA, 1997.
181 + xi pages, 9 tables, 11 figures.

Even if lecture notes are very rarely reviewed in this journal, the book under review is worth making an exception. It is a well written terse survey of uncertainty processing approaches to the decision-making models.

The text is formally divided, besides heuristic *Introduction*, into three main chapters completed by *Conclusions*, appendix (with the proof of one of statements given above) and also *Bibliography* and *Index*. The main chapters deal with *Uncertainty Formalization* (a brief but compact survey of fuzzy set theory, fuzzy measure theory, evidence theory and also probability and possibility theories), *Uncertainty Measures* (the most extensive chapter oriented to the concepts of nonspecificity, entropy, fuzziness and uncertainty in the evidence theory) and with *Principles of Uncertainty* (where the principles of minimum uncertainty, maximum uncertainty and uncertainty invariance are explained and discussed in connection with the approximations of fuzzy sets and evidence theory, as well as with the discussion of probability – possibility relation). The *Conclusions* are focused on the unsolved problems, future development and evaluation of the existing results.

The referred lecture notes deserve attention for their thorough working out. The book respects the up to date results and modern approaches to the referred topics, it stresses generalizations of the described concepts, and it is written in a brief but lucid and logically consistent style. The reader's position is simplified by a clear structure of the text and by tables and summarizations supporting the orientation also for those who are looking for a brief information on a special topic.

The book can be an externally useful and inspirative aid for university teachers and students, as well as for anyone who wishes to have a high quality handbook on the basic concepts of the uncertainty processing methods in the decision-making and artificial intelligence. In spite of its relatively small extent the book contains surprisingly great amount of relevant knowledge.

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