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**Possibility theory: Qualitative and quantitative aspects.** (English) Zbl 0924.68182

Gabbay, Dov M. (ed.) et al., Handbook of defeasible reasoning and uncertainty management systems. Vol. 1: Quantified representation of uncertainty and imprecision. Dordrecht: Kluwer Academic Publishers. 169-226 (1998).

The paper summarizes the recent state of the approaches in possibility theory and its relations to the existing models of uncertainty. It, in principle, recognizes two main approaches to the possibility concepts, namely the qualitative and quantitative one. The former approach is related to nonmonotonic reasoning meanwhile the latter displays close relations to probabilistic models. The wide-ranging paper is divided into five main sections devoted to introductory concepts and interpretations of the possibility, set functions connected with the possibility distribution, links fuzziness and possibility, more detailed presentation of the qualitative possibility theory and, finally, to a deeper understanding of various aspects of the quantitative possibility. The paper is completed by a representative list of references.

For the entire collection see [\[Zbl 0908.90001\]](#).

Reviewer: [M.Mareš \(Praha\)](#)

**MSC:**

[68T27](#) Logic in artificial intelligence  
[03E72](#) Theory of fuzzy sets, etc.  
[68T30](#) Knowledge representation

Cited in **65** Documents

**Keywords:**

[fuzzy set](#); [belief](#); [possibility theory](#); [models of uncertainty](#); [fuzziness](#)