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Foundations of Neural Networks, Fuzzy Systems, and Knowledge Engineering
by Nikola Kasabov

Neural networks and fuzzy systems are different approaches to introducing human-like reasoning to intelligent information systems. This text is the first to combine the study of these two subjects, their basics and their use, along with the symbolic AI methods, the traditional statistical methods of data analysis, and the chaos theory, to build comprehensive artificial intelligence systems. All these techniques are applied to a set of simple prototype problems with applications in engineering, business and finance. AI problems that cover most of the application-oriented research in the field (speech recognition, image processing, classification, planning, optimisation, prediction, control, decision making, game simulation, chaos analysis) are discussed and illustrated with concrete examples. Intended both as a text for advanced undergraduate and postgraduate students as well as a reference for researchers in the field of knowledge engineering, "*Foundations of Neural Networks, Fuzzy Systems, and Knowledge Engineering*" has chapters structured for various levels of teaching. Teaching materials, such as PowerPoint presentations, slides etc., are available free. An integrated software environment and other software that can be used to solve the problems and to do the exercises from the book, as well as data sets and Power Point lecture notes, are available from the WWW: **http://www.kedri.info** (books -> Foundations of NN,FS and KE).

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