

# Literaturverzeichnis

Die folgenden Literaturangaben sind nach dem Namen des Verfassers bzw. des zuerst genannten Verfassers oder Herausgebers und der (in Klammer gesetzten) Jahreszahl des Erscheinens geordnet. Abkürzungen wurden wegen häufiger auftretender Verweise benutzt für eine Reihe von Sammelbänden; dies sind:

AFSTA – Advances in Fuzzy Set Theory and Applications (M. M. GUPTA, R. K. RAGADE, R. R. YAGER, Hg.), North-Holland Publ. Comp., Amsterdam 1979.

ARDA – Approximate Reasoning in Decision Analysis (M. M. GUPTA, E. SANCHEZ, Hg.), North-Holland Publ. Comp., Amsterdam 1982.

ARES – Approximate Reasoning in Expert Systems (M. M. GUPTA et al., Hg.), North-Holland Publ. Comp., Amsterdam 1985.

FADP – Fuzzy Automata and Decision Processes (M. M. GUPTA, G. N. SARIDIS, B. N. GAINES, Hg.), North-Holland Publ. Comp., Amsterdam 1977.

FFH D170 – Problems of Evaluation of Functional Relationships from Random-Noise or Fuzzy Data (H. BANDEMER, Hg.) Heft D170 der Reihe: Freiburger Forschungshefte, Deutscher Verlag für Grundstoffindustrie, Leipzig 1985.

FFH D187 – Some Applications of Fuzzy Set Theory in Data Analysis (H. BANDEMER, Hg.) Heft D187 der Reihe: Freiburger Forschungshefte, Deutscher Verlag für Grundstoffindustrie, Leipzig 1988.

FFH D197 – Some Applications of Fuzzy Set Theory in Data Analysis II (H. BANDEMER, Hg.) Heft D197 der Reihe: Freiburger Forschungshefte, Deutscher Verlag für Grundstoffindustrie, Leipzig 1989.

FIDP – Fuzzy Information and Decision Processes (M. M. GUPTA, E. SANCHEZ, Hg.), North-Holland Publ. Comp., Amsterdam 1982.

FSAMAR – Fuzzy Sets Applications, Methodological Approaches, and Results (ST. BOCKLISCH et al., Hg.); Mathematische Forschung, Bd. 30, Akademie-Verlag, Berlin 1986.

IAFC – Industrial Applications of Fuzzy Control (M. SUGENO, Hg.), North-Holland Publ. Comp., Amsterdam 1985.

MDSS – Management Decision Support Systems Using Fuzzy Sets and Possibility Theory (J. KACPRZYK, R. R. YAGER, Hg.), Verlag TÜV Rheinland, Köln 1985.

Außerdem wurden die Namen einiger oft zitierter Zeitschriften abgekürzt; dies sind:

- EIK – Elektronische Informationsverarbeitung und Kybernetik;
- FSS – Fuzzy Sets and Systems;
- IJMMS – International Journal of Man-Machine Studies.

- ADLASSNIG, K.-P. (1982): A survey on medical diagnosis and fuzzy subsets. In: ARDA, 203-217.
- ; KOLARZ, G. (1982): CADIAG-2: Computer-assisted medical diagnosis using fuzzy subsets. In: ARDA, 219-247.
- AHNERT, G. (1986): Fuzzysteuerung von verfahrenstechnischen Prozessen mittels Beratungsrechner am Beispiel der An- und Abfahrsteuerung von Pyrolyseöfen. Dissertation, TH Leipzig.
- ALBRECHT, M. (1991): Explorative und statistische Auswertung unscharfer Daten. Dissertation, Bergakademie Freiberg.
- ALEFELD, G.; HERZBERGER, J. (1974): Einführung in die Intervallrechnung. Bibliograph. Institut, Mannheim.
- ALEXEYEV, A. V. (1985): Fuzzy algorithms execution software: the FAGOL system. In: MDSS, 289-300.
- ALTROCK, C. VON; KRAUSE, P.; ZIMMERMANN, H.-J. (1992): Advanced fuzzy logic control of a model car in extreme situations. FSS 48, 41-52.
- ANDERBERG, M. R. (1973): Cluster Analysis for Applications. Academic Press, New York.
- ARENDET, F.; STRAUBE, B.; HANSEL, N. (1979): Durchflußvorhersage für Flüsse mittels unscharfer Mengen. Acta Hydrophysica 24, 221-240.
- ASAI, K.; TANAKA, H.; OKUDA, T. (1975): Decision-making and its goal in a fuzzy environment. In: Fuzzy Sets and Their Applications to Cognitive and Decision Processes (L. A. ZADEH et al., Hg.), Academic Press, New York, 257-277.
- BALAS, E.; PADBERG, M. W. (1976): Set partitioning: A survey. SIAM Rev. 18, 710-760.
- BALDWIN, J. F. (1985): A knowledge engineering fuzzy inference language – FRIL. In: MDSS, 253-269.
- ; BALDWIN, P.; BROWN, S. (1985): A natural language interface for FRIL. In: MDSS, 270-279.
- BANDEMER, H. (1985): Evaluating explicit functional relationships from fuzzy observations. FSS 16, 41-52.
- (1987): From fuzzy data to functional relationships. Math. Modelling 9, 419-426.
- (1990): A special measure of uncertainty. FSS 38, 281-287.
- (1991): Some ideas to minimize an empirically given fuzzy function. optimization 22, 139-151.
- ; BELLMANN, A. (1991): Unscharfe Methoden der Mehrphasenregression. In: Beiträge zur Mathematischen Geologie und Geoinformatik (G. PESCHEL, Hg.), Verlag Sven von Loga, Köln, 25-27.

- ; GERLACH, W. (1985): Evaluating implicit functional relationships from fuzzy observations. FHH D170, 101-118.
- ; HULSCH, F.; LEHMANN, A. (1986): A watershed algorithm adapted to functions on grids. EIK **22**, 553-564.
- ; KRAUT, A. (1988): On a fuzzy-theory-based computer-aided particle shape description, FSS **27**, 105-113.
- ; - (1990a): A case study on modelling impreciseness and vagueness of observations to evaluate a functional relationship. In: Progress in Fuzzy Sets and Systems (W. JANKO, M. ROUBENS, M., H.-J. ZIMMERMANN, Hg.). Kluwer Academic Publ., Dordrecht, 7-21.
- ; - (1990b): On fuzzy shape factors for fuzzy shapes. FFH D197, 9-26.
- ; - ; VOGT, F. (1988): Evaluation of hardness curves at thin surface layers - A case study on using fuzzy observations, FFH D187, 9-26.
- ; NÄTHER, W. (1988): Fuzzy analogues for partial-least-squares techniques in multivariate data analysis, FFH D187, 62-77.
- ; - (1988a): Fuzzy projection pursuits. FSS **27**, 141-147.
- ; - (1992): Fuzzy Data Analysis. Kluwer Academic Publ., Dordrecht.
- ; OTTO, M. (1988): Methods to compare functions and some applications in analytical chemistry. FFH D187, 27-38.
- ; REIMANN, F. (1988): Ein neues Verfahren zur Optimierung empirischer Funktionen mit überlagerten Zufallsfehlern. messen steuern regeln **31**, 293-297.
- ; ROTH, K. (1987): A method of fuzzy-theory-based computer-aided exploratory data analysis. Biom. J. **29**, 497-504.
- ; SCHMERLING, S. (1985): Evaluating explicit functional relationships by fuzzifying the statement of its satisfying. Biom. J. **27**, 149-157.
- BEDDOW, J. K.; VETTER, A. F.; SISSON, K. (1976): Powder metalurgy review 9, Part II, Particle shape analysis. Powder Metallurgy International **8**, 107-109.
- BELLMAN, R.; GIERTZ, M. (1973): On the analytic formalism of the theory of fuzzy sets. Information Sci. **5**, 149-156.
- ; ZADEH, L. A. (1970): Decision-making in a fuzzy environment. Management Science **17**, B141-B164 [s. auch Zadeh (1987)].
- ; - (1977): Local and fuzzy logics. In: Modern Uses of Multiple-Valued Logic (J. M. DUNN, G. EPSTEIN, Hg.), Reidel, Dordrecht, 105-165.
- BESSONET, C. G. DE (1991): A Many-Valued Approach to Deduction and Reasoning for Artificial Intelligence. Kluwer Academic Publ., Dordrecht.
- BEZDEK, J. C. (1973): Fuzzy Mathematics in Pattern Classification. Ph.D. Thesis, Cornell University, Ithaca.
- (1974): Numerical taxonomy with fuzzy sets. J. Math. Biol. **1**, 57-71.
- (1981): Pattern Recognition with Fuzzy Objective Function Algorithms. Plenum Press, New York.
- BLAFFERT, T. (1984): Computer-assisted multicomponent spectral analysis with fuzzy data sets. Anal. Chim. Acta **161**, 135-148.
- BOCKLISCH, S. (1987): Prozeßanalyse mit unscharfen Verfahren. Verlag Technik, Berlin.

- ; BURMEISTER, J.; PAULINUS, D. (1987/88): Anwendung eines Klassifikationskonzeptes für die Automatisierung in der Schweißtechnik. I, II. ZIS-Mitteilungen **29**, 1005-1014; **30**, 127-136.
- BÖHME, B. (1983): Optimierende Steuerung komplexer verfahrenstechnischer Systeme bei unvollständiger Ausgangsinformation. Dissertation B, TH Leipzig.
- BOOLE, G. (1854): An investigation of the laws of thought on which are founded the mathematical theories of logic and probabilities. McMillan, Dover reprint 1958.
- BOX, G. E. P.; WILSON, K. B. (1951): On the experimental attainment of optimum conditions. J. Roy. Statist. Soc., Ser. B, **13**, 1-45.
- BRETSCHNEIDER, R. (1991): Fuzzy-Beratungssystem zur Steuerung eines industriellen Graphitierungsprozesses. Dissertation, TH Leipzig.
- BRETSCHNEIDER, U. (1988): Untersuchungen zur Verbesserung der operativen Steuerung der kontinuierlichen Roggenbrotherstellung. Dissertation, Humboldt-Universität, Berlin.
- CARLSSON, C. (1984): Fuzzy Set Theory for Management Decisions. Verlag TÜV Rheinland, Köln.
- CELMINS, A. (1987): Least squares model fitting to fuzzy vector data. FSS **22**, 245-269.
- CERUTTI, S.; PIERI, C. T. (1981): A method for the quantification of the decision-making process in a computer-oriented medical record. Intern. J. Bio-Medical Computing **12**, 29-57.
- CHAPIN, E. W. (1974/75): Set-valued set theory. I, II. Notre Dame J. Formal Logic **15**, 614-634; **16**, 255-267.
- CHOLEWA, W. (1985): Aggregation of fuzzy opinions – an axiomatic approach. FSS **17**, 249-258.
- CHOQUET, G. (1954): Theorie of capacities. Ann. Inst. Fourier, Univ. Grenoble **5**, 131-295.
- CIVANLAR, M. R.; TRUSSELL, H. J. (1986): Constructive membership functions using statistical data. FSS **18**, 1-13.
- COURNOT, A. A. (1843): Exposition de la théorie des chances et des probabilités. Paris.
- CZOGALA, E.; GOTTWALD, S.; PEDRYCZ, W. (1982): Aspects for the evaluation of decision situations. In: FIDP, 41-49.
- ; HIROTA, K. (1986): Probabilistic Sets: Fuzzy and Stochastic Approach to Decision, Control and Recognition Processes. Verlag TÜV Rheinland, Köln.
- ; PEDRYCZ, W. (1981): On identification in fuzzy systems and its application in control problems. FSS **6**, 73-83.
- D'AMBROSIO, B. (1989): Qualitative Process Theory using Linguistic Variable. Springer-Verlag, Berlin.
- DECOOMAN, G.; KERRE, E. E.; VANMASSENHOVE, F. R. (1992): Possibility theory: An integral theoretic approach. FSS **46**, 287-299.
- DELUCA, A.; TERMINI, S. (1979): Entropy and energy measures of a fuzzy set. In: AFSTA, 321-338.

- DEMPSTER, A. P. (1967): Upper and lower probabilities induced by a multivalued mapping. *Ann. Math. Stat.* **38**, 325-329.
- DIAMOND, PH. (1988): Fuzzy least squares. *Information Sci.* **46**, 141-157.
- DINOLA, A. (1984): An algorithm of calculation of lower solutions of fuzzy relation equation. *Stochastica* **3**, 33-40.
- (1985): Relational equations in totally ordered lattices and their complete resolution. *J. Math. Anal. Appl.* **107**, 148-155.
- ; SESSA, S.; PEDRYCZ, W.; SANCHEZ, E. (1989): *Fuzzy Relation Equations and Their Applications to Knowledge Engineering. Theory and Decision Libr., ser. D, Kluwer Academic Publ., Dordrecht.*
- DUBOIS, D.; PRADE, H. (1978): Operations on fuzzy numbers. *Intern. J. Systems Sci.* **9**, 613-626.
- ; – (1980): *Fuzzy Sets and Systems. Theory and Applications.* Academic Press, New York.
- ; – (1980a): Systems of linear fuzzy constraints. *FSS* **3**, 37-48.
- ; – (1982): On several representations of an uncertain body of evidence. In: *FIDP*, 167-181.
- ; – (1983a): Twofold fuzzy sets - An approach to the representation of sets with fuzzy boundaries based on possibility and necessity measures. *Fuzzy Mathematics* **3**, 53-76.
- ; – (1983b): Ranking of fuzzy numbers in the setting of possibility theory. *Information Sci.* **30**, 183-224.
- ; – (1984): A note on measures of specificity for fuzzy sets. *BUSEFAL* **19**, 83-89.
- ; – (1985): *Théorie des Possibilités: Applications à la Représentation des Connaissances en Informatique.* Masson, Paris. [Engl. Übersetzung: *Possibility Theory. An Approach to Computerized Processing of Uncertainty.* Plenum Press, New York, 1988.]
- ; – (1987): Properties of measures of information in evidence and possibility theories. *FSS* **24**, 161-182.
- DUNN, J. C. (1974): A fuzzy relative of the ISODATA-process and its use in detecting compact, well separated clusters. *J. Cybern.* **3**, 32-57.
- FISZ, M. (1962): *Wahrscheinlichkeitsrechnung und mathematische Statistik.* Deutscher Verlag der Wissenschaften, Berlin.
- FRIEDMAN, J. H.; TUKEY, J. W. (1974): A projection pursuit algorithm for exploratory data analysis. *IEEE Trans. Comput.* **23**, 881-889.
- GAINES, B. (1976): Foundations of fuzzy reasoning. *IJMMS* **8**, 623-668.
- GEYER-SCHULZ, A. (1986): *Unschärfe Mengen im Operations Research.* Dissertation, Wirtschaftsuniversität Wien.
- GILES, R. (1976): Lukasiewicz logic and fuzzy set theory. *IJMMS* **8**, 313-327.
- (1979): A formal system for fuzzy reasoning. *FSS* **2**, 233-257.
- GITMAN, I.; LEVINE, M. D. (1970): An algorithm for detecting unimodal fuzzy sets and its application as a clustering technique. *IEEE Trans. Comput.* **19**, 583-593.
- GOETSCHERIAN, V. (1980): From binary to grey-tone image processing using fuzzy logic concepts. *Pattern Recognition* **12**, 7-15.

- GOGUEN, J. A. (1968/69): The logic of inexact concepts. *Synthese* **19**, 325-373.
- (1974): Concept representation in natural and artificial languages: axioms, extensions and applications for fuzzy sets. *IJMMS* **6**, 513-561.
- GOODMAN, I. R.; NGUYEN, H. T. (1985): *Uncertainty Models for Knowledge-Based Systems*. North-Holland Publ. Comp., Amsterdam.
- GOTTWALD, S. (1979): A note on measures of fuzziness. *EIK* **15**, 221-223.
- (1979a): Mengentheoretische Eigenschaften unscharfer Begriffe. *Math. Nachrichten* **91**, 363-374.
- (1981): Fuzzy-Mengen und ihre Anwendungen. Ein Überblick. *EIK* **17**, 207-235.
- (1984): On the existence of solutions of systems of fuzzy equations. *FSS* **12**, 301-302.
- (1984a): Criteria for non-interactivity of fuzzy logic controller rules. In: *Large Scale Systems: Theory and Applications 1983* (A. STRACZAK, Hg.) Pergamon Press, Oxford, 229-233.
- (1984b): Fuzzy set theory: some aspects of the early development. In: *Aspects of Vagueness* (H. J. SKALA, S. TERMINI, E. TRILLAS, Hg.), Reidel, Dordrecht, 13-29.
- (1986): Fuzzy set theory with t-norms and phi-operators. In: *The Mathematics of Fuzzy Systems* (A. DINOLA, A. G. S. VENTRE, Hg.), *Interdisciplinary Systems Res.*, Bd. 88, Verlag TÜV Rheinland, Köln, 143-195.
- (1986a): Characterizations of the solvability of fuzzy equations. *EIK* **22**, 67-91.
- (1989): *Mehrwertige Logik. Eine Einführung in Theorie und Anwendungen*. Akademie-Verlag, Berlin.
- (1991): Fuzzified fuzzy relations. In: *Proc. IFSA '91 Brussels* (R. LOWEN, M. ROUBENS, Hg.), Bd.: *Mathematics*, Vrije Universiteit Brussels, Brüssel, 82-86.
- ; CZOGALA, E.; PEDRYCZ, W. (1982): Measures of fuzziness and operations with fuzzy numbers. *Stochastica* **6**, 187-205.
- ; PEDRYCZ, W. (1985): Analysis and synthesis of fuzzy controller. *Problems Control Inform. Theory* **14**, 33-45.
- ; – (1986): On the suitability of fuzzy models: an evaluation through fuzzy integrals. *IJMMS* **24**, 141-151.
- ; – (1986a): Solvability of fuzzy relational equations and manipulation of fuzzy data. *FSS* **18**, 1-21.
- ; – (1988): On the methodology of solving fuzzy relational equations and its impact on fuzzy modelling. In: *Fuzzy Logic in Knowledge-Based Systems, Decision and Control* (M. M. GUPTA, T. YAMAKAWA, Hg.), North-Holland Publ. Comp., Amsterdam, 197-210.
- GOWER, J.; ROSS, G. (1969): Minimum spanning trees and single linkage cluster analysis. *Appl. Statist.* **18**, 54-64.
- HARTIGAN, J. (1975): *Clustering Algorithms*. Wiley, New York.
- HAMACHER, H. (1978): *Über logische Aggregationen nicht-binär explizierter Entscheidungskriterien*. Rita G. Fischer Verlag, Frankfurt/Main.

- HIGASHI, M.; KLIR, G. J. (1983): Measures of uncertainty and information based on possibility distributions. *Int. J. General Systems* **9**, 43-58.
- HIROTA, K. (1981): Concepts of probabilistic sets. *FSS* **5**, 31-46.
- ; ARAI, Y.; HACHISU, S. (1986): Moving mark recognition and moving object manipulation in fuzzy controlled robot. *Control Theory and Advanced Technol.* **2**, 399-418.
- ; YOSHINORI, A.; PEDRYCZ, W. (1985): Robot control based on membership and vagueness. In: *ARES*, 621-635.
- HOLMBLAD, L. P.; ØSTERGAARD, J. J. (1982): Control of a cement kiln by fuzzy logic. In: *FIDP*, 389-399.
- HUBER, P. (1985): Projection pursuits. *Ann. of Statist.* **13**, 425-525.
- JAHN, K.-U. (1975): Intervall-wertige Mengen. *Math. Nachrichten* **68**, 115-132.
- KALMYKOV, S. A.; ŠOKIN, JU. I.; JULDAŠEV, Z. CH. (1986): Metody interval'nogo analiza. Nauka, Moskva (in Russisch).
- KANDEL, A. (1979): On fuzzy statistics. In: *AFSTA*, 181-199.
- (1982): *Fuzzy Techniques in Pattern Recognition*. Wiley, New York.
- (1986): *Fuzzy Mathematical Techniques with Applications*. Addison-Wesley, Reading (Mass.).
- KAUFMANN, A. (1973): *Introduction à la Théorie des Sous-Ensembles Flous; t.1: Éléments théorique de base*. Masson, Paris.
- ; GUPTA, M. M. (1985): *Introduction to Fuzzy Arithmetic: Theory and Applications*. Van Nostrand Reinhold, New York.
- KHURGIN, J. I.; POLYAKOV, V. V. (1986): Fuzzy analysis of the group concordance of expert preferences, defined by Saaty matrices. In: *FSAMAR*, 111-115.
- KICKERT, W. J. M. (1979): An example of linguistic modelling: the case of Mulder's theory of power. In: *AFSTA*, 519-540.
- ; VAN NAUTA LEMKE, M. (1976): The application of fuzzy set theory to control a warm water process. *Automatica* **12**, 301-308.
- KIEFER, J.; WOLFOWITZ, J. (1952): Stochastic estimation of the maximum of a regression function. *Ann. Math. Stat.* **23**, 462-466.
- KISZKA, J. B.; GUPTA, M. M.; NIKIFORUK, P. N. (1985): Some properties of expert control systems. In: *ARES*, 283-306.
- KLAUA, D. (1966): Über einen zweiten Ansatz zur mehrwertigen Mengenlehre. *Monatsber. Deut. Akad. Wiss. Berlin* **8**, 161-177.
- (1966a): Grundbegriffe einer mehrwertigen Mengenlehre. *Monatsber. Deut. Akad. Wiss. Berlin* **8**, 781-802.
- KLEMENT, E. P. (1982): Some remarks on a paper of R. R. Yager. *Information Sci.* **27**, 211-220.
- KLIR, G. J. (1987): Where do we stand on measures of uncertainty, ambiguity, fuzziness, and the like? *FSS* **24**, 141-160.
- KNOPFMACHER, J. (1975): On measures of fuzziness. *J. Math. Anal. Appl.* **49**, 529-534.
- KOLMOGOROV, A. N. (1933): *Grundbegriffe der Wahrscheinlichkeitsrechnung*. Springer-Verlag, Berlin.

- KRUSE, R. (1983): Schätzfunktionen für Parameter von unscharfen Zufallsvariablen. Habilitationsschrift, TU Braunschweig.
- (1984): Statistical estimation with linguistic data. *Information Sci.* **33**, 197-207.
- ; MEYER, K. D. (1987): *Statistics with Vague Data*. Reidel, Dordrecht.
- ; SCHWECKE, E.; HEINSOHN, J. (1991): *Uncertainty and Vagueness in Knowledge Based Systems*. Springer-Verlag, Berlin.
- KRUSINSKA, E.; LIEBHART, J. (1986): A note on the usefulness of linguistic variables for differentiating between some respiratory diseases. *FSS* **18**, 131-142.
- KWAKERNAAK, H. (1978/79): Fuzzy random variables. I, II. *Information Sci.* **15**, 1-15; **17**, 253-278.
- LAKOV, D. (1985): Adaptive robot under fuzzy control. *FSS* **17**, 1-8.
- LARKIN, L. I. (1985): A fuzzy logic controller for aircraft flight control. In: *IAFC*, 87-104.
- LARSEN, R. M. (1980): Industrial applications of fuzzy logic control. *IJMMS* **12**, 3-10.
- LEIBNIZ, G. W. (1703): Brief an Bernoulli vom 3. 12. 1703. In: *Mathematische Schriften* (GERHARDT, Hg.), Band III/1, Halle 1855.
- LESMO, L.; SAITTA, L.; TORASSO, P. (1982): Learning of fuzzy production rules for medical diagnosis. In: *ARDA*, 249-260.
- LIPP, H.-P. (1980): Die Anwendung der unscharfen Mengentheorie für ein Steuerkonzept zur operativen Führung komplexer Systeme. Dissertation A, TH Karl-Marx-Stadt (Chemnitz).
- ; GUENTHER, R. (1986): An application of a fuzzy Petri net in complex industrial systems. In: *FSAMAR*, 188-196.
- LIU, X. H.; WANG, P. Z.; CHEN, Y. P. (1985): Approximate reasoning in earthquake engineering. In: *ARES*, 519-528.
- LOO, S. G. (1977): Measures of fuzziness. *Cybernetica* **20**, 201-210.
- LOWEN, R. (1978): On fuzzy complements. *Information Sci.* **14**, 107-113.
- LUKASIEWICZ, J.; TARSKI, A. (1930): Untersuchungen über den Aussagenkalkül. *Comptes Rendus Soc. Sci. et Lettr. Varsovie*, cl. III, **23**, 30-50.
- MAMDANI, E. H. (1976): Advances in the linguistic synthesis of fuzzy controllers. *IJMMS* **8**, 669-678.
- ; ASSILIAN, S. (1975): An experiment in linguistic synthesis with a fuzzy logic controller. *IJMMS* **7**, 1-13.
- ; GAINES, B. R. (Hg.) (1981): *Fuzzy Reasoning and Its Applications*. Academic Press, New York.
- MATHERON, G. (1975): *Random Sets and Integral Geometry*. Wiley, New York.
- MEYER, K.-D. (1987): Grenzwertsätze zum Schätzen von Parametern unscharfer Zufallsvariablen. Dissertation, TU Braunschweig.
- MIRKIN, B. G. (1979): *Group Choice*. Wiley, New York.
- MISES, R. v. (1919): Grundlagen der Wahrscheinlichkeitsrechnung. *Math. Zeitschr.* **5**, 52-99.

- MIYAKOSHI, M.; SHIMBO, M. (1984): A strong law of large numbers for fuzzy random variables. *FSS* **12**, 133-142.
- MIYAMOTO, S. (1990): *Fuzzy Sets in Information Retrieval and Cluster Analysis*. Kluwer Academic Publ., Dordrecht.
- MIZUMOTO, M. (1982): Fuzzy inference using max- $\Delta$  composition in the compositional rule of inference. In: *ARDA*, 67-76.
- ; TANANKA, K. (1981): Fuzzy sets and their operations. *Information and Control* **48**, 30-48.
- ; ZIMMERMANN, H.-J. (1982): Comparison of fuzzy reasoning methods. *FSS* **8**, 253-283.
- MOON, R. E.; JORDANOV, S.; PEREZ, A.; TURKSEN, I. B. (1977): Medical diagnostic system with human-like reasoning capability. In: *MEDINFO 77* (D. B. SHIRES, H. WOLF, Hg.), North-Holland Publ. Comp., Amsterdam, 115-119.
- MOORE, R. E. (1966): *Interval Analysis*. Prentice-Hall, Englewood Cliffs (N. J.).
- (1979): *Methods and Applications of Interval Analysis*. SIAM, Philadelphia.
- MURAYAMA, Y. ET AL. (1985): Optimizing control of a diesel engine. In: *IAFC*, 63-72.
- NÄTHER, W. (1990): On possibilistic inference. *FSS* **36**, 327-337.
- (1991): Sugeno's  $\lambda$ -fuzzy measures as hit-or-miss probabilities of Poisson point processes. *FSS* **43**, 251-254.
- ; KRAUT, A. (1992): Grey-tone image processing with fuzzy structural elements. (Erscheint in *Syst. Anal. Model. Simul.*)
- NAGEL, M.; FEILER, D.; BANDEMER, H. (1985): Pattern Recognition in der Umweltanalytik. In: *Mathematische Statistik in der Technik* (H. BANDEMER, Hg.), Tagungsvorträge, Bergakademie Freiberg, Heft 1, 61-66.
- NAHMIA, S. (1979): Fuzzy variables in a random environment. In: *AFSTA*, 165-180.
- NEITZEL, A. L.; HOFFMAN, L. J. (1980): Fuzzy cost/benefit analysis. In: *Fuzzy Sets. Theory and Applications to Policy Analysis and Information Systems* (P. P. WANG, S. K. CHANG, Hg.), Plenum Press, New York, 275-290.
- NGUYEN, H. (1978): On conditional possibility distributions. *FSS* **1**, 299-310.
- (1979): Some mathematical tools for linguistic probabilities. *FSS* **2**, 53-65.
- NOVAK, V. (1986): The origin and claims of fuzzy logic. In: *FSAMAR*, 21-26.
- (1989): *Fuzzy Sets and Their Applications*. Hilger, Bristol.
- OGAWA, H.; FU, K. S.; YAO, J. T. P. (1985): SPERIL-II: an expert system for damage assessment of existing structure. In: *ARES*, 731-744.
- O'HIGGINS HALL, L.; KANDEL, A. (1986): *Designing Fuzzy Expert Systems*. Verlag TÜV Rheinland, Köln.
- ORLOVSKY, S. A. (1977): On programming with fuzzy constraint sets. *Kybernetes* **6**, 197-201.
- OTTO, M.; BANDEMER, H. (1986): Calibration with imprecise signals and concentrations based on fuzzy theory. *Chemometrics and Intelligent Laboratory Systems* **1**, 71-78.

- ; - (1986a): Pattern recognition based on fuzzy observations for spectroscopic quality control and chromatographic fingerprinting. *Anal. Chim. Acta* **184**, 21-31.
- ; - (1986c): A fuzzy method for component identification and mixture analysis in the ultraviolet range. *Anal. Chim. Acta* **191**, 193-204.
- ; - (1988a): A fuzzy approach to predicting chemical data from incomplete, uncertain, and verbal compound features. In: *Physical Property Prediction in Organic Chemistry* (C. JOCHUM, M. G. HICKS, J. SUNKEL, Hg.), Springer-Verlag, Berlin, 171-189.
- ; - (1988b): Fuzzy inference structures for spectral library retrieval systems. In: *Proc. Intern. Workshop on Fuzzy Systems Applications*, Iizuka, Fukuoka, 28-29.
- PAPPIS, C. P.; MAMDANI, E. H. (1977): Fuzzy logic controller for traffic junction. *IEEE Trans. Syst., Man and Cybernet.* **7**, 707-712.
- PAWLAK, Z. (1984): Rough probabilities. *Bull. Polish Acad. Sci. Math.* **32**, 607-612.
- PEDRYCZ, W. (1989): *Fuzzy Control and Fuzzy Systems*. Research Stud. Press, Taunton sowie Wiley, New York.
- PESCHEL, M.; STRAUBE, B.; MENDE, W. (1986): Fuzzy inferences for the analysis of qualitative behaviour. In: *FSAMAR*, 157-164.
- POSPELOV, D. A. (Hg.) (1986): *Nečetkie množestva v modelach upravlenija i isskusstvennogo intellekta*. Nauka, Moskva (in Russisch).
- PRADE, H.; NEGOITA, C. V. (Hg.) (1986): *Fuzzy Logic in Knowledge Engineering*. Verlag TÜV Rheinland, Köln.
- PURI, M. L.; RALESCU, D. (1982): A possibility measure is not a fuzzy measure. *FSS* **7**, 311-313.
- ; - (1986): Fuzzy random variables. *J. Math. Anal. Appl.* **114**, 409-422.
- RALESCU, D. (1982): Towards a general theory of fuzzy variables. *J. Math. Anal. Appl.* **86**, 176-193.
- RAMAN, B.; KERRE, E. E. (1985): Application of fuzzy programming to ship steering. In: *ARES*, 719-730.
- RAMIK, J.; RIMANEK, J. (1985): Inequality relation between fuzzy numbers and its use in fuzzy optimization. *FSS* **16**, 123-138.
- RATSCHEK, H. (1971): Die Subdistributivität der Intervallarithmetik. *Z. Angew. Math. Mech.* **51**, 189-192.
- RAY, K. S.; DUTTA MAJUMDER, D. (1985): Structure of an intelligent fuzzy logic controller and its behaviour. In: *ARES*, 593-619.
- REICHEL, A. (1986): *Optimale Fertigungsmittelkonfiguration nach dem Ähnlichkeitsprinzip unter der Anwendung der multivariaten Datenanalyse*. Dissertation, TU Dresden.
- RODABAUGH, S. E.; KLEMENT, E. P.; HÖHLE, U. (Hg.) (1992): *Applications of Category Theory to Fuzzy Subsets*. Kluwer Academic Publ., Dordrecht.
- ROMMELFANGER, H. (1988): *Entscheiden bei Unschärfe*. Fuzzy Decision Support Systeme. Springer-Verlag, Heidelberg.
- RUSPINI, E. H. (1970): Numerical methods for fuzzy clustering. *Information Sci.* **2**, 319-350.

- (1973): New experimental results in fuzzy clustering. *Information Sci.* **6**, 273-284.
- SAITTA, L.; TORASSO, P. (1981): Fuzzy characterization of coronary disease. *FSS* **5**, 245-258.
- SAMBUC, R. (1975): Fonctions  $\Phi$ -floues. Application a l'aide au diagnostic en pathologie thyroïdienne. Dissertation, Universität Marseille.
- SANCHEZ, E. (1977): Solutions in composite fuzzy relation equations: application to medical diagnosis in Brouwerian logic. In: *FADP*, 221-234.
- (1984): Solution of fuzzy equations with extended operations. *FSS* **12**, 237-248.
- SAVAGE, L. J. (1972): *The Foundations of Statistics*. 2nd edition, Dover Publications, New York.
- SCHARF, E. M.; MANDIC, N. J. (1985): Application of a fuzzy controller to the control of a multi-degree-of-freedom robot arm. In: *IAFC*, 41-62.
- SCHMERLING, S.; BANDEMER, H. (1985): Methods to estimate parameters in explicit functional relationships. *FFH D170*, 69-90.
- SCHMUCKER, K. J. (1984): *Fuzzy Sets, Natural Language Computations, and Risk Analysis*. Computer Science Press, Rockville.
- SCHÜLER, W. (1985): Experimentelle Expertensysteme für röntgenologische Diagnostikaufgaben unter Verwendung eines unscharfen Systemkonzepts. Dissertation B, TH Karl-Marx-Stadt (Chemnitz).
- SCHWEIZER, B.; SKLAR, A. (1960): Statistical metric spaces. *Pacific J. Math.* **10**, 313-334.
- ; – (1961): Associative functions and statistical triangle inequalities. *Publ. Math. Debrecen* **8**, 169-186.
- ; – (1983): *Probabilistic Metric Spaces*. North-Holland Publ. Comp., Amsterdam.
- SERRA, J. (1988): *Image Analysis and Mathematical Morphology; Vol. 2*. Academic Press, New York.
- SESSA, S. (1984): Some results in the setting of fuzzy relation equations theory. *FSS* **14**, 281-297.
- SHAFFER, G. (1973): Allocation of probability. Ph.D. Thesis, Princeton University.
- (1976): *A Mathematical Theory of Evidence*. Princeton University Press, Princeton.
- SMETS, PH. (1978): Un modèle mathématico-statistique simulant le processus du diagnostic médical. Thèse d'agrégation, Université Libre de Bruxelles.
- (1981): The degree of belief in a fuzzy event. *Information Sci.* **25**, 1-19.
- (1981a): Medical diagnosis: fuzzy sets and degrees of belief. *FSS* **5**, 259-266.
- (1982): Probability of a fuzzy event: an axiomatic approach. *FSS* **7**, 153-164.
- (1983): Information content of an evidence. *IJMMS* **19**, 33-43.
- (199x): Belief functions: the disjunctive rule of combination and the generalized Bayesian theorem. *Intern. J. Approximate Reasoning* (im Druck).
- SMITHSON, M. (1987): *Fuzzy Set Analysis for Behavioral and Social Sciences*. Springer, New York.

- SOMBÉ, LÉA (1991): Schließen bei unsicherem Wissen in der Künstlichen Intelligenz. Vieweg, Braunschweig.
- STOYAN, D.; KENDALL, W. S.; MECKE, J. (1987): Stochastic Geometry and Its Applications. Wiley, New York.
- STRAUBE, B. (1983): Anwendung der Theorie unscharfer Mengen bei der Modellierung realer Systeme. Dissertation B, Akademie der Wissenschaften, Berlin.
- (1986): Model building and fuzzy systems. In: FSAMAR, 133-146.
- SUGENO, M. (1974): Theory of Fuzzy Integral and Its Applications. Ph.D. Thesis, Tokyo Inst. of Technology, Tokyo.
- (1977): Fuzzy measures and fuzzy integrals: a survey. In: FADP, 89-102.
- ; NISHIDA, M. (1985): Fuzzy control of a model car. FSS 16, 103-113.
- ; TERANO, T. (1977): A model of learning on fuzzy information. Kybernetes 6, 157-166.
- TANAKA, H.; UEJIMA, S.; ASAI, K. (1982): Linear regression analysis with fuzzy model. IEEE Trans. Syst., Man and Cybernet. 12, 903-907.
- ; WATADA, J. (1988): Possibilistic linear systems and their application to the linear regression model. FSS 27, 275-289.
- TERANO, T.; ASAI, K.; SUGENO, M. (1991): Fuzzy Systems Theory and Its Applications. Academic Press, New York.
- TURKSEN, I. B.; ZHONG, Z. (1990): An approximate analogical reasoning schema based on similarity measures and interval-valued fuzzy sets. FSS 34, 323 - 346.
- TUSCH, G. (1981): Ein fuzzy Algorithmus zur diagnostischen Klassifizierung in der cranialen Computertomographie. In: GI-11. Jahrestagung (W. BAUER, Hg.), Informatik-Fachberichte 50, Springer-Verlag, Berlin, 598-605.
- UMANO, M. (1985): Fuzzy-set-theoretic data structure system and its application. In: MDSS, 301-313.
- VIERTL, R. (1990): Statistical inference for fuzzy data in environmetrics. Environmetrics 1, 37-42.
- (1992): On statistical inference based on non-precise data. In: Modelling uncertain data (H. BANDEMER, Hg.), Akademie-Verlag, Berlin, 121 - 130.
- WAGENKNECHT, M.; HARTMANN, K. (1986): On the solution of direct and inverse problems for fuzzy equation systems with tolerances. In: FSAMAR, 37-44.
- ; – (1986a): Fuzzy modelling with tolerances. FSS 20, 325-332.
- WANG P.-Z.; SANCHEZ, E. (1982): Treating a fuzzy subset as a projectable random subset. In: FIDP, 213-219.
- WEBER, S. (1983): A general concept of fuzzy connectives, negations, and implications based on t-norms and t-conorms. FSS 11, 115-134.
- (1984): Measures of fuzzy sets and measures of fuzziness. FSS 13, 247-271.
- WEIDNER, A. J. (1981): Fuzzy sets and Boolean-valued universes. FSS 6, 61-72.
- WEISS, W.; HÖRIG, H.-J.; SCHÜTTE, J. (1983): Anwendung der unscharfen Systembeschreibung für die mikrorechnergestützte Steuerung eines Hochtemperaturprozesses. messen steuern regeln 26, 213-216.

- WENSTØP, F. (1975): Deductive verbal models of organizations. *IJMMS* 8, 301-357.
- (1980): Quantitative analysis with linguistic values. *FSS* 4, 99-115.
- WOLD, H. (1982): Soft modeling: The basic designs and some extensions. In: *Systems under Indirect Observations* (K. G. JÖRESKOG, H. WOLD, Hg.), North-Holland Publ. Comp., Amsterdam, Bd. 2, 1-54.
- (1985): Systems analysis by partial least squares. In: *Measuring the Unmeasurable* (P. NIJKAMP, H. LEITNER, N. WRIGLEY, Hg.). Martinus Nijhoff Publ., Dordrecht.
- YAGER, R. R. (1979/80): On the measure of fuzziness and negation. Part I: Membership in the unit interval. *Intern. J. General Systems* 5, 221-229; Part II: Lattices. *Information and Control* 44, 236-260.
- (1980): On a general class of fuzzy connectives. *FSS* 4, 235-242.
- (1981): Measurement of properties on fuzzy sets and possibility distribution. In: *Proc. 3rd Int. Seminar on Fuzzy Set Theory* (E. P. KLEMENT, Hg.), Johannes-Kepler-Universität Linz, 211-222.
- (1983): An introduction to application of possibility theory. *Human Systems Management* 3, 246-253.
- (1984): Fuzzy subsets with uncertain membership grades. *IEEE Trans. Syst., Man and Cybernet.* 14, 271-275.
- (1984a): A representation of the probability of a fuzzy subset. *FSS* 13, 273-283.
- YAGISHITA, O.; ITOH, O.; SUGENO, M. (1985): Application of fuzzy reasoning to the water purification process. In: *IAFC*, 19-40.
- YASUNOBU, S.; HASEGAWA, T. (1986): Evaluation of an automatic container crane operation system based on predictive fuzzy control. *Control Theory and Advanced Technol.* 2, 419-432.
- YASUNOBU ; MIYAMOTO, S. (1985): Automatic train operation system by predictive fuzzy control. In: *IAFC*, 1-18.
- ZADEH, L. A. (1965): Fuzzy sets. *Information and Control* 8, 338-353 [s. auch (1987)].
- (1965a): Fuzzy sets and systems. In: *Systems Theory* (J. FOX, Hg.), Polytechnic Press, Brooklyn, 29-37.
- (1968): Probability measures of fuzzy events. *J. Math. Anal. Appl.* 23, 421-427 [s. auch (1987)].
- (1969): The concepts of system, aggregate and state in system theory. In: *System Theory* (L. A. ZADEH, E. POLAK, Hg.), McGraw Hill, New York, 3-42.
- (1971): Similarity relations and fuzzy orderings. *Information Sci.* 3, 159-176 [s. auch (1987)].
- (1971a): Toward a theory of fuzzy systems. In: *Aspects of Network and System Theory* (R. E. KALMAN, N. DE CLARIS, Hg.), Holt, Rinehart and Winston, New York, 469-490.
- (1973): Outline of a new approach to the analysis of complex systems and decision processes. *IEEE Trans. Systems, Man and Cybernet.* 3, 28-44 [s. auch (1987)].

- (1975): The concept of a linguistic variable and its application to approximate reasoning. I–III. *Information Sci.* **8**, 199-250, 301-357; **9**, 43-80 [s. auch (1987)].
  - (1976): A fuzzy-algorithmic approach to the definition of complex or imprecise concepts. *IJMMS* **8**, 249-291 [s. auch (1987)].
  - (1978): Fuzzy sets as a basis for a theory of possibility. *FSS* **1**, 3-28 [s. auch (1987)].
  - (1978a): PRUF – a meaning representation language for natural languages. *IJMMS* **10**, 395-460 [s. auch (1987)].
  - (1979): A theory of approximate reasoning. In: *Machine Intelligence 9* (J. E. HAYES, D. MICHIE, L. I. MIKULICH, Hg.), Wiley, New York, 149-194 [s. auch (1987)].
  - (1981): Test-score semantics for natural languages and meaning representation via PRUF. In: *Empirical Semantics I* (B. RIEGER, Hg.), Brockmeyer, Bochum, 281-349.
  - (1982): Possibility theory as a basis for representation of meaning. In: *Sprache und Ontologie, Akten 6. Intern. Wittgenstein Symp. 1981, Kirchberg/Wechsel, Hölder-Pichler-Tempsky, Wien*, 253-262.
  - (1983): The role of fuzzy logic in the management of uncertainty in expert systems. *FSS* **11**, 199-227 [s. auch (1987)].
  - (1984): A theory of commonsense knowledge. In: *Aspects of Vagueness* (H. J. SKALA, S. TERMINI, E. TRILLAS, Hg.), Reidel, Dordrecht, 257-295 [s. auch (1987)].
  - (1985): Syllogistic reasoning in fuzzy logic and its application to usuality and reasoning with dispositions. *IEEE Trans. Syst., Man and Cybernet.* **15**, 754-763 [s. auch (1987)].
  - (1987): *Fuzzy Sets and Applications. Selected Papers.* (R. R. YAGER et al., Hg.), Wiley, New York.
- ZEMANKOVA-LEECH, M.; KANDEL, A. (1984): *Fuzzy Relational Data Bases – A Key to Expert Systems.* Verlag TÜV Rheinland, Köln.
- ; – (1985): Uncertainty propagation to expert systems. In: *ARES*, 529-54.
- ZHANG, J.-W. (1980): A unified treatment of fuzzy set theory and Boolean-valued set theory – fuzzy set structures and normal fuzzy set structures. *J. Math. Anal. Appl.* **76**, 297-301.
- ZIMMERMANN, H.-J. (1976): Description and optimization of fuzzy systems. *Int. J. General Systems* **2**, 209-215.
- (1978): Fuzzy programming and linear programming with several objective functions. *FSS* **1**, 45-55.
  - (1979): Theory and applications of fuzzy sets. In: *Operational Research '78, Proc. 8th IFORS Intern. Conf. Toronto* (K. B. HALEY, Hg.), North-Holland Publ. Comp., Amsterdam, 1017-1033.
  - (1985): *Fuzzy Set Theory and Its Applications.* Kluwer-Nijhoff, Dordrecht. [2. Aufl. 1991]
  - (1987): *Fuzzy Sets, Decision Making and Expert Systems.* Kluwer-Nijhoff, Dordrecht.