

**André de Korvin**  
**Computer and Mathematical Sciences**  
**University of Houston-Downtown**  
**One Main Street**  
**Houston, TX 77002**  
**(713) 221-8403**

**DESCRIPTION OF EXPERIENCE**

|                     |   |
|---------------------|---|
| <b>1987-Present</b> | <b>University of Houston-Downtown, Houston, Texas.</b><br><b>Professor of Computer and Applied Mathematical Sciences</b>  |
| <b>1987-1987</b>    | <b>Indiana University, Purdue University at Indianapolis, IN</b><br><b>Professor and Chairman of Computer &amp; Information Science</b>   |
| <b>1986-1987</b>    | <b>Indiana University, Purdue University at Indianapolis, IN</b><br><b>Professor and Acting Chairman of Computer &amp; Information Science</b>  |
| <b>1983-1986</b>    | <b>Indiana University, Purdue University at Indianapolis, IN</b><br><b>Professor of Computer &amp; Information Science</b>  |
| <b>1982-1983</b>    | <b>Indiana State University, Terre Haute, IN</b><br><b>Professor of Mathematics and Computer Science</b>  |
| <b>1981-1982</b>    | <b>Indiana University, Purdue University at Indianapolis, IN</b><br><b>Visiting Professor of Mathematics and Computer Science</b>   |
| <b>1975-1981</b>    | <b>Indiana State University, Terre Haute, IN</b><br><b>Professor of Mathematics and Computer Science</b>  |
| <b>1971-1975</b>    | <b>Indiana State University, Terre Haute, IN</b><br><b>Associate Professor of Mathematics</b>   |
| <b>1969-1971</b>    | <b>Indiana State University, Terre Haute, IN</b><br><b>Assistant Professor of Mathematics</b>   |
| <b>1968-1969</b>    | <b>Carnegie-Mellon University, Pittsburgh, PA</b><br><b>Assistant Professor Visiting at Indiana State University</b>  |
| <b>1967-1968</b>    | <b>Carnegie-Mellon University, Pittsburgh, PA</b><br><b>Assistant Professor of Mathematics</b>  |
| <b>1964-1967</b>    | <b>I.B.M. Corporation, Los Angeles Scientific Center, CA</b><br><b>During Doctoral Program served as Consultant Mathematician with responsibility for assisting in the solution of mathematical aspects of technological problems. When necessary work involved programming or surveillance of programming for I.B.M. 360 and 7094 computers.</b> |
| <b>1963-1964</b>    | <b>I.B.M. Corporation, San Jose, CA</b><br><b>Worked as Mathematician and Programmer in the Computer Design and Development Facility. Programming involved I.B.M. 7094.</b>   |
| <b>1961-1963</b>    | <b>University of California, Los Angeles, CA</b><br><b>Served as Teaching Assistant, instructing in Algebra and Calculus.</b>   |

**EDUCATIONAL BACKGROUND**

**Sorbonne, University of Paris, France (1955-1959)**  
**University of California, Los Angeles, CA (1961-1967)**

**B.A. -- January 1962**  
**M.A. -- June 1963**  
**Ph.D. -- August 1967**

**PERSONAL DATA**

**Married, no children**

**RESEARCH INTERESTS**

**Mathematical Analysis, Uncertainty in Expert Systems, Knowledge Acquisition, Fuzzy Logic, Rough Sets, Theory of Evidence, Control Theory, Probability and Decision Making, Stochastic**

## **Processes, Applications To Business.**

My very first research efforts started in 1963 while I was working for the I.B.M. Scientific Center at Los Angeles. These efforts led to my first paper, in the field of Automata Theory, which was published in the SIAM Journal of Control in 1968 (see [1]). At the time, I was completing my Ph.D. thesis on von Neumann algebras. My first publications, naturally enough, were in that general area (see [2] and [3] for example). Later I was able to obtain related results for norm closed algebras, i.e.  $C^*$  algebras (for example see [5] and [12]). Later still I developed an interest in integration theory and other areas of functional analysis.

From 1975 I became more interested in Probability (for example see [22] and [38]), Control Theory (for example see [49] and [37]), Non-Linear Analysis (for example see [34] and [41]) and Numerical Analysis (for example see [45] and [51]).

In 1978 I became interested in Computer Science. This was brought about in a rather natural way as the Department of Mathematics at Indiana State had decided to go ahead with a B.S. program in Computer Science. In 1983 I held the rank of Professor in the Department of Computer and Information Science of Indiana University, Purdue University at Indianapolis.

My initial research interests include the construction of stochastic models for information flows, see [53] through [57]. In [55] we study a mechanism followed by a decision maker ethically bound to pursue the best available course of action. The model allows for feedback information to be input for each cycle of decision making. Equations describing the updated expected utilities in terms of the learning factor are obtained. The estimators obtained from a martingale or a submartingale allowing the analysis of when and how the decision maker can terminate the feedback decision making loop. In [56] the study is generalized so that termination is analyzed although the estimators do not form a martingale or a submartingale. More recent articles [57] -- [64], for example, concentrate on goal uncertainty.

My more recent research [70]-- is in the areas of the mathematical theory of evidence, uncertainty in expert systems, knowledge acquisition, fuzzy logic, neural nets, neuron-fuzzy systems and how to apply these theories to the problems of object recognition and expert systems construction, as well as to business problems. This work was funded by NASA for the Summers of 88, 89, 90, 91 and for the year 1992 as well as by NSF and the Army Research Office from 1995 to 1999. Fuzzy logic, the Dempster-Shafer theory and Rough sets are important techniques used to investigate many problems in these areas.

In 1995, I was one of the co-principals investigators to obtain funding from the army to carry out research in advanced distributed simulation and also one of the co-principals to obtain funding from NSF to build a research infrastructure at the University of Houston-Downtown.

## **LANGUAGES**

French  
Russian

## **PERSONAL INTERESTS**

Poetry  
Theater  
Music  
Basketball (spectator only)  
Swimming

## **MEMBERSHIPS**

ACM  
American Mathematical Society  
Mathematical Association of America

American Association for the Advancement of Science  
New York Academy of Science  
Pi Mu Epsilon  
Sigma Xi

**ARTICLES PUBLISHED OR ACCEPTED FOR PUBLICATION**

1. "Approximation theorems on some Classes of Automata" Siam J. of Control 6 (1968), (3):422--436.
2. "Expectations on von Neumann Algebras" Bulletin of the A.M.S. 74 (1968), (5):192--194.
3. "Normal Expectations on von Neumann Algebras" Pacific J. of Math. 27 (1968), (2):333--338.
4. "Representation Theorems for Linear Operators" Proc. of the Conf. on Functional Anal. and its Appl. Held in Kanpur, India, December 12--21 (1969):1--11.  
Co-authors R. A. Alo` and R. J. Easton.
5. "Stable Maps and Schwartz Maps" Trans. of the A. M. S. 148 (1970):283--291.
6. "Measures on Semi-Groups and some Representations" J. of Math. Anal. and Appl. 31 (1970), (1):140--146.  
Co-author R. J. Easton.
7. "Real Compactness and a Representation Theorem for Separating Algebras of Functions" J. of Math. Anal. and Appl. 31 (1970), (2):431--433.  
Co-author R. A. Alo`.
8. "Complete Sets of Expectations on von Neumann Algebras" The Quart. J. of Math. (Oxford) 22 (1971), (85):135--142.
9. "Some Representation Theorems" Rocky Mountain J. of Math. 1 (1971), (3):561--573.  
Co-author R. J. Easton.
10. "Functions of Bounded Variations on Idempotent Semi-Groups" Math. Annalen 194 (1971):1--11.  
Co-author R. A. Alo`.
11. "A new theoretical model for depicting profit Optimality" J. of Financial and Quantitative Analysis 6 (1971), (4):1117--1121.  
Co-author E. A. Spitz.
12. "Expectations on  $B^*$  Algebras" J. für die Reine und Angew Math. 251 (1971):1--6.  
Co-author R. J. Easton.
13. "A one sided Fubini Theorem" J. of Math. Anal. and Appl. 38 (1972), (2):387--398.  
Co-author R. A. Alo`.
14. "Vector valued absolutely continuous functions on Idempotent Semi-Groups" Trans. of A. M. S. 172 (1972):491--500.  
Co-authors R. A. Alo` and R. J. Easton.
15. "The Vitali Hahn Saks theorem for operator valued linear mappings" Riv. Mat. Univ. Parma (1972), (3):195--202.

- Co-authors R. A. Alo` and C. Cheney.
16. "An abstract Radon Nikodym theorem" *J. of Math. Anal. and Appl.* 42 (1973), (1):110--118.  
Co-authors R. A. Alo` and C. Cheney.
  17. "Some non-weak integrals defined by linear functionals" *Quarterly J. of Math. (Oxford)* (2) (1973):289--299.  
Co-author L. Kunes .
  18. "Topological aspects of Q-regular measures" *Studia Math.* 48 (1973):49--60.  
Co-authors R. A. Alo` and L. Kunes.
  19. "Topology induced by Banach Function Spaces" *Proc. Inter. Conf. on Topo. Pittsburgh, Springer Verlag Lecture Notes Ser.* 378:16--45.
  20. "The topological and the algebraic dual" *Proc. Inter. Conf. in Anal. Madras, Springer Verlag Lecture Notes Ser.* 399:22--33.
  21. "Approximate integration" *J. of Math. Anal. and Appl.* 48 (1974):127--138.  
Co-author R. A. Alo`.
  22. "Martingales in Banach algebras" *J. für die reine und angew. Math.* 273 (1975):49--56.  
Co-authors R. A. Alo` and C. Cheney.
  23. "Topologies associated with operators on normed vector spaces" *Symposia Mathematica* 16 (1975):209--243.  
Co-author R. A. Alo`.
  24. "A representation theorem for  $AC(R)^*$ " *Portug. Math.* 34 (1975):163--171.  
Co-author R. J. Easton.
  25. "Representation of Hammerstein operators by Nemytskii measures" *J. of Math. Anal. and Appl.* 52(1975):490--513.  
Co-authors R. A. Alo` and Vo Van Tho.
  26. "Non-linear operators on sets of measures" *Annali di Mat. Pura Appl.* 109 (1976):1--22.  
Co-authors R. A. Alo` and C. Cheney.
  27. "Exaves for  $C(X)$ ,  $L(X)$  and injectivity" *Symposia Mathematica* 17 (1976):125--168.  
Co-author R. A. Alo`.
  28. "Averaging operators on normed Kothe Spaces" *Annali di Mat. Pura Appl.* 112 (1977) : 33--48.  
Co-authors R. A. Alo` and C. Roberts.
  29. "The representation of linear operators on spaces of finitely additive set functions" *Proc. of the Edinburgh Math. Soc.* 20 (1977) : 233--242.  
Co-author C. Cheney.
  30. "Integration theory for Hammerstein operators" *J. of Math. Anal. and Appl.* 61 (1977) : 72--96.  
Co-authors R. A. Alo` and Vo Van Tho.
  31. "The Riesz representation theorem for measures" *Riv. Mat. Univ. Parma* 4 (3) (1977) : 301--308.
  32. "A Hellinger Hahn decomposition theorem" *Riv. Mat. Univ. Parma* 4 (3) (1977) : 309--315.

Co-authors R. A. Alo` and Vo Van Tho.

33. "A non-linear, sequential data processing algorithm for recursively estimating trajectories and ballistic coefficients" Proc. NSF Regional Conf. in Numer. Anal. Jackson, Ms. October 1977 : 1--14.  
Co-authors R. A. Alo` and C. Roberts.
34. "Non-linear integration on L spaces" J. of Math. Anal. and Appl. 63 (1978) : 563--590.  
Co-author R. A. Alo`.
35. "Application of bases to the study of measures and operators on measure spaces" Anal. di Mat. Pura ed Appl. 118 (1978) : 67--77.  
Co-author R. A. Alo`.
36. "Some approximation theorems for vector measures" Rev. Roum. de Math. Pures et Appl. 23(9), (1978) : 1289--1295.  
Co-author R. A. Alo`.
37. "A non-linear integral and a Bang-Bang theorem" Internat'l Conf. on Non-Linear Analysis and its Applications. Arlington, Va. April 1978 : 25--46.  
Co-authors R. A. Alo` and T. Alvager.
38. "The optional sampling theorem for convex set valued Martingales" J. für die reine und angew. Math. 310 (1979) : 1.  
Co-authors R. A. Alo` and C. Roberts.
39. "p-Integrable selectors of multimeasures" Intern. J. of Math. and Math. Sci. 2(2), (1979):209--221.  
Co-author C. Roberts.
40. "Interchange of vector-valued integrals when the measures are Bochner or Pettis indefinite integrals" Bull. of the Austral. Math. Soc. 20 (1979):199--206.  
Co-author C. Roberts.
41. "Non-linear integration on measures" J. of Non-Linear Analysis 4 (1980):1--14.  
Co-author R. A. Alo`.
42. "Maps whose values are closed convex subsets of a Banach space" J. of Math. Anal. and Appl. 76 (1980) (1):1--9.  
Co-authors R. A. Alo` and L. Kunes.
43. "On some properties of continuous multimeasures" J. Math. Anal. and Appl. 75 (1980):402--410.  
Co-author C. Roberts.
44. "Double adjoints of Hammerstein functionals defined on continuous functions" Anal. di Mat. Pura ed Appl. 126 (1980):93--102.  
Co-author C. Roberts.
45. "Some stability theorems for autonomous systems of differential equations in critical cases" Math. Utilitas 17 (1980):111--126.  
Co-authors R. A. Alo` and C. Roberts.
46. "Convergence theorems for some scalar valued integrals when the measure is Nemytskii" The Pacific J. of Math. 92 (1981):329--343.  
Co-author C. Roberts.

47. "Measures representing valuation maps on functions of bounded variation over idempotent semi-groups" *J. of Math. Anal. and Appl.* 83 (1981):224--237.  
Co-author C. Roberts.
48. "New York Metropolitan retail buying offices---a statistical update" *Chicago Conf. Proc. Midwest Marketing Assoc.* (1981):19--25.
49. "A Bang-Bang type theorem for measures" *Proc. Conf. on non-linear phenomenon in Math. Sciences 1982.* Acad. Press pp. 25--30.  
Co-authors R. A. Alo` and G. Graham.
50. "Functions of finite p-variation over idempotent semi-groups and Lebesgue spaces" *Oxford Quarterly J.* 2 (1982):333--343.  
Co-author C. Roberts.
51. "Explicit Runge Kutta methods for the Newton-Cotes type" *Utilitas Mathematica* 23 (1983):269--279.  
Co-author C. Roberts.
52. "Non-linear operators on Lebesgue spaces" *Karachi J. of Math.* 2 (1984).  
Co-author R. A. Alo`.
53. "Switching mechanisms in a generalized information system" *Cybernetics and Systems* 15 (1984):145--167.  
Co-author R. Kleyle.
54. "Goal uncertainty in a generalized information system: convergence properties of the estimated expected utilities" *J. of Stochastic Analysis and Appl.* 2 (1984):437--457.  
Co-author R. Kleyle.
55. "Decision making mechanisms and stopping times in a generalized information system" *J. of Math. Modeling* 6 (1985):259--271.  
Co-authors R. A. Alo` and R. Kleyle.
56. "Some dynamical properties of sequentially acquired information" *J. of Math. Modeling* 6 (1985): 339--351.  
Co-authors R. A. Alo` and R. Kleyle.
57. "A convergence theorem for convex set valued supermartingales" *J. of Stochastic Analysis and Appl.* 3 (1985):433--445.  
Co-author R. Kleyle.
58. "A two phase approach to making decisions involving goal uncertainty" *J. of Information Science* 11 (1986):161--171.  
Co-author R. Kleyle.
59. "Emergence of a dominant course of action in a general feed-back loop when goal uncertainty is present" *J. of the Amer. Soc. for Info. Sc.* 38 (2)(1987):111--117.  
Co-author R. A. Alo` and R. Kleyle.
60. "External documentation and its quantitative relationship to the internal information state of a decision maker: the information profile" *J. of the Amer. Soc. for Info. Sc.* 38 (1987):405--419.  
Co-authors M. C. Yovits, R. Kleyle and M. Mascarenhas.

61. "A \*-mixing convergence theorem for convex set valued processes" *Inter. J. of Math. and Math. Sciences* 10 (1) (1987):9--16.  
Co-author R. Kleyle.
62. "Information and its relationship to decision making: the information profile and other quantitative measures: a brief summary" *Proc. of the Foundations of Information and Software Science III* Jens Rasmussen and Pranas Zunde eds. (1987): 231--241 Plenum Pub. Corp.
63. "The relationship between information and decision making and the effect on the reliability and failure of information systems" In *Information and Catastrophy: the Proc. of a NATO ARW on Information System Failure* A. Debons and J. Wise eds. (1987):37--46.  
Co-authors M. C. Yovits, R. Kleyle, L. Medsker and M. Mascarenhas.
64. "Martingale properties of an information-feedback loop" *J. of Math. Modeling* 9 (1988):1--12.  
Co-author R. Kleyle.
65. "A generalized approach to information flow and analysis relating information to decision making" In *Advances in Computer Science*, G. E. Lasker, editor, International Institute for Advanced Studies in Systems Research and Cybernetics, Windsor, Canada(1988):246--263.  
Co-authors M. C. Yovits, R. Kleyle, and L. Medsker.
66. "Goal uncertainty and the supermartingale property in an information feed-back loop" *Stochastic Analysis and Appl.* 7(3) (1989):291--307.  
Co-author R. Kleyle.
67. "A unified model for data acquisition and decision making" *J. Information Science* 15 (1989):149--161.  
Co-author R. Kleyle.
68. "An evidential approach to problem solving when a large number of knowledge systems are available" *International J. of Intelligent Systems*, 5 (1990):293--306.  
Co-authors R. Kleyle and R. Lea.
69. "Uncertainty in expert systems: sets of expert decision makers and the Dempster-Shafer approach" *J. of Stochastic Analysis and Applications*, 8(3) (1990):315--327.  
Co-author R. Kleyle and R. Lea.
70. "A belief function approach to information utilization in decision making" *J. of the Amer. Soc for Info. Sciences* 41(8)(1990):569--580.  
Co-author R. Kleyle.
71. "On the use of Neural Network Systems" *Forum on Artificial Intelligence in Acquisition Management Proceedings* (1990): 844--873.  
Co-author B. Humpert.
72. "Properties of States of Recognition Arising from a Set of Knowledge Systems with Imperfect Reporting" *J. of Stochastic Analysis and Applications* 9(2) (1991):133--146.  
Co-authors R. Kleyle and M. Murphy.
73. "Methods For Efficient Object Detection Under Conditions Of Uncertainty and with Implications For Path Planning" *North American Fuzzy Information Processing Society Proceedings* (1991):42--46 University of Missouri- Columbia  
Co-authors M. Murphy and R. Kleyle.

74. "A Decision Making Model For Multi-attribute Problems Incorporating Uncertainty And Bias Measures" *J. of Computers and Operations Research*, 18(4) (1991) 335--342.  
Co-authors M. Shipley and R. Obid.
75. "Optimization and Expert Systems with Neural Networks" *The CP90 Europhysics Conference on Computational Physics* (1991) 86--104.  
Co-author B. Humpert.
76. "Designing and Implementing Blackboard Architecture" *J. of Expert Systems for Information Management* 3 (1991) 165--193.  
Co-author B. Humpert.
77. "A Dempster-Shafer Based Approach To Technology Assessment Applied To Selection Of Software Packages" *Proceedings of the Portland Intern. Conf. on Management of Engineering and Technology*. Portland, (Oct. 1991) 566--569.  
Co-author M. Shipley.
78. "On selecting a set of simultaneous courses of action when imprecision is involved" *J. of Math. and Comp. Modeling* 16(11) (1992) 157-162.  
Co-author R. Kleyle.
79. "Using Multiple Sources of Information to Recognize and Classify Objects" *J. of Stochastic Analysis and Applications* 10 (5) (1992) 573-589.  
Co-authors V. Espino and R. Kleyle.
80. "Uncertainty in Expert Systems: The Mathematical Theory of Evidence" In *EXPERTSYS-92 I.I.T.T. International Technology Transfer Series* ed. Niku-Lari (1992) 111-115.
81. "Determining Rules for Closing Customer Service Centers: A Public Utility Company's Fuzzy Decision" *North Amer. Fuzzy Information Processing Society Proc.* (1992): 398-407 Puerto Vallarta, Mexico.  
Co-authors M. Shipley and R. Lea.
82. "Using Knowledge Systems to Solve the Object Recognition Problem when Features Fail to Be Homogenous" *J. of Approximate Reasoning* Vol. 8 N. 2 (1993) 141-162.  
Co-authors R. Kleyle and R. Lea.
83. "A Dempster-Shafer Based Approach To Compromise Decision Making With Multiattributes Applied To Product Selection" *J. of IEEE Transactions on Engineering Management* 40(1) (1993) 60-67.  
Co-author M. Shipley.
84. "Certain and Possible Rules for Decision Making Using Rough Sets Theory Extended To Fuzzy Sets" *Proceedings of the Third International Workshop on Neural Networks and Fuzzy Logic* (1993) 54-68.  
Co-author M. Shipley.
85. "Detection of Irregularities by Auditors: A Rough Set Approach" *The Indian J. of Accounting* (24) (1993) 44-54.  
Co-authors P. Siegel and K. Omer.
86. "Legal Decision Making Under Uncertainty " In *EXPERTSYS-93. I.I.T.T. International Technology Transfer Series*. Ed. Niku-lari (1993) 59-67.  
Co-authors G. Quirchmayr and S. Hashemi.

87. "A Stochastic Model For Constructing An Access Policy For Multiple Knowledge Systems" *The J. of Stochastic Analysis and Applications* 12(2) (1994) 225-247.  
Co-author R. Kleyle.
88. "Extracting Fuzzy Rules Under Uncertainty and Measuring Definability Using Rough Sets" *The J. of Intelligent & Fuzzy Systems* Vol. 2 (1994) 75-87  
Co-authors B. Bourgeois and R. Kleyle.
89. "Object Identification When Imprecise Information Is Available From Multiple Sources Of Unequal Reliability" *The J. of Intelligent & Fuzzy Systems* Vol. 2 (1994) 191-199.  
Co-author R. Kleyle.
90. "Identifying Precedents Under Uncertainty" *Proc. of the 5th Intl. Conf. on Databases and Expert Systems. Lecture Notes in Computer Science No. 856, Springer\_Verlag* (1994) 320-328.  
Co-authors G. Quirchmayr and S. Hashemi.
91. "Introduction To The Theory Of Weighted Apertures" *J. of Neural, Parallel, and Scientific Comp.* Vol. 2 (1994) 407-420.  
Co-authors S. Aityan and R. Alo`.
92. "Dealing With Uncertainty In Insurance Contracts" *EXPERTSYS-94 Technology Transfer Series, IITT International*, (1994) 397-403.  
Co-authors G. Quirchmayr and S. Hashemi
93. "An Application of Control Systems to Cost Variance Analysis" *J. of Managerial Finance*, Vol. 21, No. 3 (1995) 17-35.  
Co-authors P. Siegel and J. Strawser.
94. "Two Methods For Object Identification With Imprecise Information Applied to Image Analysis" *IASTED/ISMM The International. Conf. Of Intelligent Information Management Systems* (June 1995) 115-118 Washington D.C.  
Co-authors R. Kleyle, B. Bourgeois, and G. Quirchmayr.
95. "Uncertainty Methods In Accounting: A Methodological overview" *Applications of Fuzzy Sets And The Theory Of Evidence To Accounting.* JAI Press (1995) 3-18.
96. "Modeling Job Scheduling For Audit Uncertainties Using Fuzzy Logic" *Applications of Fuzzy Sets And The Theory Of Evidence To Accounting.* JAI Press (1995) 39-54.  
Co-authors A. Chandra, S. Hashemi and M. Muchnik.
97. "An Application of Fuzzy Sets to Cost Allocation" *Applications of Fuzzy Sets And The Theory Of Evidence To Accounting.* JAI Press (1995) 55-71.  
Co-authors P. Siegel and S. Agrawal.
98. "Dealing With Ambiguity In The Tax Law : An Application of Rough Set Theory To The Determination Of Debt Worthlessness" *Applications Of Fuzzy Sets And The Theory Of Evidence To Accounting.* JAI Press (1995) 105-119.  
Co-authors G. Carnes and J. Hagan.
99. "Ambiguity And Vagueness In Determining Reasonable Compensation For Closely Held Corporations : The Use Of Rough Set Theory And Fuzzy Set Theory To Develop Decision Rules" *Applications Of Fuzzy Sets And The Theory Of Evidence To Accounting.* JAI Press (1995) 121-134.  
Co-authors J. Hagan and P. Siegel.

100. "Determining The Extent Of Budgetary Slack : A Fuzzy Approach" Applications Of Fuzzy Sets And The Theory Of Evidence To Accounting. JAI Press (1995) 237-252.  
Co-authors K. Omer and J. Leavins.
101. "New Project Development : A Decision Model Based On Dempster Shafer Theory" Applications Of Fuzzy Sets And The Theory Of Evidence To Accounting. JAI Press (1995) 253-267.  
Co-authors K. Omer and M. Shipley.
102. "Rough Set Theory Fuzzy Belief Functions Related to Statistical Confidence: Application and Evaluation for Golf Course Closing" J. of Stochastic Analysis And Applications 13(4) (1995) 487-502.  
Co-author M. Shipley.
103. "Capital Budgeting : A Fuzzy Set Approach For Determining Expected Value of Cash Flows" The Asian Review of Accounting Vol 3 (1) (1995) 105-125.  
Co-authors K. Omer and P. Siegel
104. "On Fuzzy Difference Equation" J. of IEEE Transactions on Fuzzy Systems (Nov. 1995) 469-473.  
Co-author E. Deeba.
105. "A Fuzzy Model of Managerial Decision Making Incorporating Risk and Ambiguity Aversion" Lecture Notes In Computer Science, Proceedings of the 6th Intl. Conf. On Databases and Expert Systems. Springer Verlag (London, Sept. 1995) 124-135.  
Co-authors G. Quirchmayr and S. Hashemi.
106. "An Approach to Object Identification Using Fuzzy Expected Payoffs" J. of Intelligent & Fuzzy Systems Vol 3 (1995) 305-316.  
Co-author R. Kleyle.
107. "Managing Uncertainty In Contract Law" Expersys-95, Expert Systems Applications & Artificial Intelligence (1995) 191-196.  
Co-authors G. Quirchmayr and S. Hashemi.
108. "Logical Optimization When Uncertainty Is Present" Database and Expert Systems Appl. The 6th International conf. Workshop DEXA 1995 (London, 1995) 87-96.  
Co-author M. Beheshti.
109. "Applying Fuzzy Logic To An Object Oriented Query Optimization Algorithm" Expersys-95, Expert Systems Application & Artificial Intelligence (1995) 313-318.  
Co-author M. Beheshti.
110. "Pexider Functional Equations - Their Fuzzy Analogs" The Intl. J. of Mathematics and Mathematical Sciences .Vol 19(3) (1996) 529-538.  
Co-authors E. Deeba and S. Xie.
111. "A Fuzzy Logic Approach For Determining Expected Values, A Project Management Application" The J. of The Operational Research Society. 47(1996) 562-569.  
Co-authors K. Omer and M. Shipley.
112. "Selecting Optimal Hedging Tools "The 3rd World Congress On Expert Systems Conf. (1996) 139-146.  
Co-authors O. Duangploy, S. Hashemi, G. Quirchmayr.

113. **“Develop Decision Rules To Aid Tax Professionals In Ambiguous Planning Situations”**  
**J. of Managerial Finance, Human Information Processing In Business Decision Making**  
**Vol. 22 11(1996) 1-17.**  
**Co-authors J. Hagan and P. Siegel.**
  
114. **“Decision Making On The Basis Of Expected Cost Variance; A Fuzzy Set Approach”**  
**J. of Managerial Finance, Human Information Processing In Business Decision Making Vol.**  
**22 11(1996) 18-29.**  
**Co-authors R. Kleyle and T. McLaughlin.**
  
115. **“Promotion Decisions: A Rough Set Approach”**  
**J. of Managerial Finance, Human Information Processing In Business Decision**  
**Making Vol. 22 11(1996) 43-53.**  
**Co-authors T. Scandura and P. Munter.**
  
116. **“Policy Selection Based On A Markov Model With Fuzzy Transition Probabilities”**  
**J. Of Intelligent & Fuzzy Systems, Vol. 4 (1996) 121-130.**  
**Co-author R. Kleyle.**
  
117. **“An Adaptive Environment Modeling Under Uncertainty” Proc. Of The Sixth Conf.**  
**On Computer Generated Forces And Behavioral Representation. July (1996) 573-581.**  
**Co-authors R. Alo, M. Beheshti, C. Hu and O. Sirisaengtaksin.**
  
118. **"On A Fuzzy Logistic Differential Equation" the J. Of Differential Equations and Dynamical**  
**Systems. Vol. 4, 2(1996) 149-156.**  
**Co-author E. Deeba.**
  
119. **"A Fuzzy Difference Equation With An Application" The J. of Difference Equation and**  
**Applications. Vol 2 (1996) 365-374.**  
**Co-authors E. Deeba and E. L. Koh.**
  
120. **“Workstation Scheduling For Flexible Assembly Lines Using Fuzzy Logic” Proc. Of**  
**The First Annual Conf. In Industrial Engineering Dec. (1996) 95-100.**  
**Co-authors S. Hashemi and F. Attia.**
  
121. **“A Formal Model For Computing Argumentation Strategies” EXPERSYS-96.**  
**Expert Systems Applications. Artificial Intelligence. (1996) 47-53.**  
**Co-authors G. Quirmayr, S.Hashemi and R. Robbins.**
  
122. **“TERRAS: The Travel Reimbursement Advisory Expert System” EXPERSYS-96.**  
**Expert Systems Applications. Artificial Intelligence. (1996) 541-545.**  
**Co-authors S.Hashemi , R. Robbins and M.Paravic.**
  
123. **"Object Identification With Imprecise Information From Sources Of Unequal Importance With**  
**An Application To Image Analysis" The International J. of Microcomputer Applications.**  
**Vol 15 (1996) 133-137.**  
**Co-authors R. Kleyle and G. Quirchmayr.**
  
124. **“A Fuzzy Controller for Adjusting Sample Size to Meet Quality Goals” Productivity**  
**And Quality Management Frontiers 6. Engineering and Management Press, Institute**  
**Of Industrial Engineers , Norcross , GA, 1997, 501-513.**  
**Co-authors M. Shipley and K. Omer.**

125. "An Extension of Ramsey-Boiteaux Pricing to Services Offering Limited Deferability Subject to Reliability Constraints and Fuzzy Demand Functions." *The J. Of Managerial Finance* Vol 23 (1997) 1-15  
Co-authors J. Boronico and R. Kleyle.
126. "Investing In New Companies In An Unstable Economic Environment: A Fuzzy Set Approach" *The J. Of Managerial Finance* Vol 23 (1997) 68-80  
Co-author R. Kleyle and K. Karim.
127. "Fuzzy Petri Nets For Decision Making In Uncertain and Variable Environment" *J. of Neural Parallel and Scientific Computations* 5 (1997) 309-324.  
Co-authors M. Beheshti ,A. Berrashed, C. Hu, and O. Sirisaengtaksin.
128. " Transition Probabilities For Markov Chains Having Fuzzy States" *J. of Stochastic Analysis and Appl.* Vol 15 (4) (1997) 527-546.  
Co-author R. Kleyle.
129. "Neural Network With Imprecise And Conflicting Data" *Advances in Industrial Engineering Applications and Practice* Vol.2 (1997) San Diego. 1085-1090.  
Co-authors O. Sirisaengtaksin and G. Kutiev.
130. "The Use Of The Theory Of Evidence To Tune Fuzzy Rules" *Advances in Industrial Engineering Applications and Practice* Vol.1 (1997) San Diego. 57-62.  
Co-authors S. Hashemi and L. Chaouat.
131. "Bifpet Versus Pert; Fuzzy Probability Instead Of The Beta Distribution"  
*J. Of Engineering And Technology Management.* Vol. 14 (1997) 49-65.  
Co-authors M. Shipley and K. Omer.
132. "Reducing The Uncertainty In New Product Development: A Fuzzy Set Approach"  
*Academy of Marketing Studies Proceedings* Vol. 2 (2) (1997) Maui' Hawaii. 20-27.  
Co-authors R. Kleyle , D. Deeter-Schmeltz and P. Siegel.
133. "Expected Transition Cost Based On A Markov Model Having Fuzzy States With An Application To Policy Selection" *J. Of Stochastic Analysis And Appl.* Vol. 16 (1) (1998) 51-64.  
Co-author R. Kleyle
134. "Using The Extension Theorem To Define Fuzzy Expectations" *J. of Stochastic Analysis and Appl.* Vol. 16(2) (1998) 303-310.  
Co-author R. Kleyle.
135. "On Interval Weighted Three Layer Neural Networks" *The 31 st. Annual Simulation Symposium Boston, Massachusetts April 5-9 (1998) 188-194.*  
Co-authors M. Beheshti, A. Becharred, C. Hu, O. Sirisaengtaksin.
136. "Computer Security Model Based On Uncertain/Partial Information" *Information Processing and Management of Uncertainty in Knowledge Based Systems. Paris, La Sorbonne (1998) 1840-1845.*  
Co-authors M. Beheshti, A. Becharred and O. Sirisaengtaksin.
137. "Constructing One Step And Limiting Fuzzy Transition Probabilities For Finite Markov Chains" *The J. Of Intelligent & Fuzzy Systems* Vol. 6 (1998) 223-236.  
Co-author R. Kleyle.

138. "Knowledge Acquisition Using Rough Sets When Membership Values Are Fuzzy Sets." The J. Of Intelligent & Fuzzy Systems Vol. 6 (1998) 237-244.  
Co-author R. Kleyle and McKeegan.
139. "Utilizing Fuzzy Logic In Decision Making." Appl. Of Fuzzy Sets And The Theory Of Evidence To Accounting II (1998) 3-14. JAI Press.  
Co-author K. Omer.
140. "Knowledge Acquisition And The Development Of Decision Rules : Studying And Evaluating Internal Control Structure" Appl. Of Fuzzy Sets And The Theory Of Evidence To Accounting II (1998) 71-86. JAI Press.  
Co-authors P. Siegel, J. Strawser.
141. "Project Cost Control : A Fuzzy Logic Approach To Crashing Project Activity" Appl. Of Fuzzy Sets And The Theory Of Evidence To Accounting II (1998) 87-98. JAI Press.  
Co-authors K. Omer, M. Shipley.
142. "Rule Extraction Using Rough Sets When Membership Values Are Intervals" Lecture Notes In Computer Science. DEXA 98 9<sup>th</sup>. Intern. Conf. Vienna, Austria (August 1998) 841-850. Ed. Springer Verlag.
143. "Approaches To Multicast Allocation In HLA Data Distribution" Spring 98 Simulation Interoperability Workshop ( March 1998) 1063-1068.  
Co-authors A. Berrached, M. Beheshti, O. Sirisaengtaksin.
144. "Spinal Cord Simulation For Chronic Pain Management : Toward An Expert System" Appl. Of Advanced Info. Technology, A World Congress On Expert Systems ( March 1998) 156-164. Mexico City.  
Co-authors K. Alo, R. Alo, V. Kreinovitch
145. "A Note on Fuzzy Conditional Expectation" the J. Of Stochastic Analysis And Applications. Vol 16. N.6, (1998) 1005-1017.  
Co-author R. Kleyle
146. " Comparing Values Arising From Imprecise Information " Proc. Of 1998 Conf. On Simulation Methods And Appl. The Society For Computer Simulation. Orlando, Florida ( Nov. 1998) 188-196.
147. " Optimizing Concurrency Control In OODBS Using Fuzzy Sets " EXPERSYS-98 Expert Systems. Artificial Intelligence. (1998). 189-195.  
Co-authors M. Beheshti, A. Berrached and O. Sirisaengtaksin
148. "Autonomous Control Vehicles Using Fuzzy-Neural Networks " EXPERSYS-98. Expert Systems. Artificial Intelligence. (1998). 25-30.
149. " Extending Jain's Maximization Principle To Fuzzy Sets With Continuous Support " IBERAMIA '98. Progress in Artificial Intelligence, Proceedings of the 6<sup>th</sup> Iberoamerican Conference ( 1998 ) 93-106.  
Co-authors R. Alo and R. Kleyle.
150. " Analysis by Fuzzy Difference Equations of a Model of CO<sub>2</sub> Level in the Blood " Applied Mathematics Letters (12) (1999) 33-40.  
Co-author E. Deeba.

151. " Concurrency Control When Uncertainty Is Present " 4<sup>th</sup> Annual International Comp. Conference, Sharif University of Tech. Teheran, Iran (1999) 34-44.  
Co-authors M. Beheshti , A. Berrached, and O. Sirisaengtaksin.
152. " Considering The Cost Of Quality When Adjusting Sample Size To Meet Quality Goals " Productivity and Quality Management Frontiers 8 MCB Press (1999) 739-754. (nominated for best paper award)  
Co-author M. Shipley.
153. "Determining The Larger Of Two Continuous Fuzzy Sets With Unbounded Support By The Cut-Off Method " 2<sup>nd</sup> International Conf. On Non Linear Problems In Aviation And Aerospace. Ed. Sivasundaram European Conf. Publications, Cambridge (1999) Vol.1 , 181-188.  
Co-author R. Kleyle.
154. " A Hierarchical Grid Based Approach To Data Distribution In The High Level Distribution " 2<sup>nd</sup> International Conf. On Non Linear Problems In Aviation And Aerospace. Ed. Sivasundaram European Conf. Publications, Cambridge (1999) Vol.1, 103110.  
Co-authors M. Beheshti, A. Berrached and O. Sirisaengtaksin.
155. "Validation Of Authentic Reasoning Expert Systems " J. Of Information Sciences 117 (1999) 19-46.  
Co-authors Laurie Webster, Jen Gwo Chen.
156. " Techniques And Applications Of Fuzzy Set Theory To Difference And Functional Equations And Their Utilization In Modeling Diverse Systems" Fuzzy Theory Systems, Techniques And Applications. Vol1, Academic Press (1999) 87-110.  
Co-authors E. Deeba, S. Xie.
157. "Project Management Using Fuzzy Logic And The Dempster Shafer Theory Of Evidence To Select Team Members For The Project Duration" 18<sup>th</sup> International Conf. Of The North Amer. Fuzzy Information Processing Soc. ( June 1999) 640-644.  
Co-author M. Shipley.
158. "Fuzzy Analytical Hierarchical Processes " J. Of Intelligent And Fuzzy Systems 7 (1999) 387-400.  
Co-author R. Kleyle.
159. " A Theoretical Model For Assessing Expected Loss In Determining Cost-Benefit Effectiveness Of Internal Controls" (January 2000) 212-215. Mc. Graw-Hill Co. Emerging Role of IT in the Global Resources Environment.  
Co-authors M. Shipley and K. Omar
160. " Assignment Of Tasks To Competing Nodes When Task Duration Times Are Fuzzy" J. Of Intelligent And Fuzzy Systems 8 (2000) 43-61.  
Co-authors R. Kleyle and S. Hashemi
161. " Decision Rules For Achieving Target Values Based On Quality Function Deployment Customer And Technical Input" Productivity and Quality Management Frontiers" MCB University Press (2000) 21-26.  
Co-author M. Shipley
162. "Genetic Algebras- Their Fuzzy Analog" J. Of Fuzzy Mathematics Vol. 8 (2) (2000) 401-409.  
Co-author E. Deeba
163. " Using Fuzzy Relation Equations For Adaptive Access Control In Distributed Systems" SSGRR International Conf. In Advances In Infrastructure For e-Business And Education On The

- Internet. L'Aquila, Rome, Italy. (July31-August 06 ) (2000) on CD paper no. 150, 6 pages.  
Co-authors M. Beheshti, A. Berached and R. Alo
164. " An Access Control Model Based On Fuzzy Set Theory" 8<sup>th</sup> International Conf. IPMU Information Processing and Management Of Uncertainty In Knowledge Based Systems. Madrid, Spain. (July 3-7) (2000) 890-895.  
Co-authors M. Beheshti, A. Berached and R. Alo
165. " On Firing Rules Of Fuzzy Sets Of TypeII" The International J. Of Applied Mathematics Vol.3 (2) (2000) 151-159.  
Co-authors C. Hu and O. Sirisaengtaksin
166. " Assigning Tasks To Resource Pools: A Fuzzy Set Approach" DEXA 2000. The 11<sup>th</sup> International Conf. London, England. Springer Verlag Lecture Notes In Computer Science Series (2000) 102-114.  
Co-authors S. Hashemi, G. Quirchmayr and R. Kleyle
167. " Evaluating Policies Based On Their Long Term Average Cost" J. Of Stochastic Analysis And Applications Vol.18 (6) (2000) 901-919.  
Co-authors S. Hashemi and G. Quirchmayr
168. "Using Fuzzy Places and Hypertokens to Reduce the Number of States in a Stochastic Petri Net" J. Of Intelligent And Fuzzy Systems Vol.9 (2000) 43-51.  
Co-author R. Kleyle
169. "Finding the Dominant Rule when the Antecedants and the Consequents are Fuzzy Sets of Type II and the Inputs are Crisp or Fuzzy" Non Linear Problems in Aviation and Aerospace (2000) 219-225.  
Co-authors: E. Deeba, S. Hashemi and C. Hu.
170. "Validation of Authentic Reasoning Expert Systems" Rutgers Series in Accounting Information Systems. (2001) 227-251. (The contents are identical to [155.] )  
Co-authors Laurie Webster, Jen Gwo Chen.
- 171 "Design of an Unmanned Vehicle Controller" Conf. Proceedings ICON IT' 2001. Bangkok, Thailand (May 2001) 22-30  
Co-authors: M. Beheshti, A. Berrached and R. Alo.
172. "A Fuzzy Set Approach to Resource Procurement for Multiphase Projects Subject to Flexible Budgetary Constraints" J. Of Intelligent And Fuzzy Systems Vol. 9 (2001) 225-233.  
Co-author: R. Kleyle.
173. "Sample Size: Achieving Quality and Reducing Financial Loss" Internt. J. of Quality and Reliability Management. Vol. 18 No. 6 and 7 (2001) 678-601.( Content of paper [152.] )  
Co-author: M. Shipley.
174. "Adjusting Sample Size and Frequency of Sampling to Meet Quality Goals" Portland Internt. Conf. on Management of Engineering and Technology. (July 29-August 2) (2001) Portland, Oregon. CD Rom,7 pages.  
Co-author: M. Shipley.
175. "Utilizing Interval-Valued Evidence Sets to Select Products Based on Perceived Market Competitiveness and Cost" Proc. of the Internt. Conf. on Industrial Engineering and Production Management. Université Laval. (August 20-23) (2001) 11 pages.  
Co-authors: M. Shipley and R. Kleyle.

176. "Determination of Membership Functions with Uncertainty" World Multiconference on Systems, Cybernetic and Information. Vol. 9, Information Systems Technology. Internt. Institute of Information and Systematics (July 2001) 361-364.

Co-authors: O. Sirigaengtaksin.

177 "Applying Fuzzy Relation Equatios to Threat Analysis" World Multiconference on Systems, Cybernetic and Information. Vol. 9, Information Systems Technology. Internt. Institute of Information and Systematics (July 2001) 356-360.

Co-authors: A. Berrached and M. Beheshti.

178. "A Fuzzy Logic Based Model to Satisfy Goals for Successful Product/Service Introduction" European J. of Operational Research. Vol. 135, No 1, (November 2001) 209-219.

Co-authors: M. Shipley and K. Omer.

179. "A Fuzzy-Analytic-Hierarchical Process Model for the Metal Decision in the Automotive Industry" The Internt. Body Engineering Conf. (Oct.2001), Detroit, Michigan (on CD).

Co-authors: R. Kleyle and M. Bayou.

180. "Association Analysis With Interval Valued Fuzzy Sets and Body Of Evidence" Proceedings of the 2002 Intern. Conf. On Fuzzy Systems (2001) 518-523 (Honolulu) Co-authors P. Chen and C. Hu

181 "A New Approach For Studying Fuzzy Functional Equations" Intern. Journal of Mathematics and Mathematical Sciences (2001) 733-741 Co-author E, Deeba

182. "A Decision Making Model For An Optimal Medicine Using Analytical Hierarchical Processes" Journal of Intelligent and Fuzzy Systems (2001) 135-145 Co-author J. Yoon

183. "Evaluating a Model of Forest Successions Using Fuzzy Analysis" Stochastic Analysis and Applications 19(5) (2001) 893-901. Co-author Jeong-Mi Yoon

184. "Fuzzy Functions To Select An Optimal Action In Decision Theory" 2002 Annual Meeting of the North American Fuzzy Information Processing Society (2002) 348-353. Co-authors F. Modave and R. Alo

185. "Body of Evidence with Fuzzy Consequences" Proceedings of Neural, Parallel and Scientific Computations.(2002) 145-150. Co-author O. Sirisaengtaksin

186. "Utilizing Fuzzy Compatibility of Skill Sets For Team Selection In Multi-Phase Projects" Journal of Engineering and Technology Management Vol 19(2002) 307-319 Co-authors M. Shipley and R, Kleyle

187. "Analyzing the Make or Buy Decision in the Automobile Industry Using the Fuzzy Analytic Hierarchical Process" Intelligent Systems Technology and Applications Vol.5 (2003) p. 239-265. Co-authors R. Kleyle and M. Bayou

188. "Evaluating a Forest Model Using the Fuzzy Rule Matrix" The Far Eastern J. of Mathematical

Sciences (2004) p. 239-251. Co-author Jeong-Mi Yoon

189. "Fuzzy Quality Function Deployment: Determining the Distributions of Effort Dedicated To Technical Change" Intern. Trans. Of Operational Research 11 (2004) 293-307

190. "Assessing Risks Due to Threats to Internal Control in a Computer Based Accounting Information Systems: A Pragmatic Approach Based on Fuzzy Set Theory" International Journal of Intelligent Systems in Accounting, Finance and Management Vol.12 (2) (2004) 139-152  
Co-authors M. Shipley and K. Omar

191. "Generating Rules From Data: Going from Simple to More Uncertain Specifications" The Journal of Neural, Parallel and Scientific Computations Vol.12 (2004) 193-206 Co-author O. Sirisaengtaksin

192. "Generating and Applying Rules For Interval Valued Observations" Lecture Notes in Computer Science, Ed. Springer-Verlag, Vol. 3177 (2004) 279-284  
Co-authors C. Hu and P. Chen

193. "Generating and Applying Rules for Web Documents Retrieval" The Far East Journal of Applied Mathematics Vol.16 (3) (2004) 249-272  
Co-authors E. Deeba and P. Chen

194. "A Body of Evidence Approach Under Partially Specified Environments" The Journal of Neural, Parallel and Scientific Computations Vol. 13 (2005) 91-106  
Co-author O. Sirisaengtaksin and S. Hashemi

195. "Sampling Rules To Achieve Quality, Maximize Benefits and Minimize Financial Loss" Managerial Finance, Modelling of Multi-Criteria Decisions, Vol 31 ,3 (2005) 1-18 Co-author M. Shipley

196. " A Genetic Algorithm Approach For Analyzing Network Intrusion Hyperalerts" Fuzzy Logic, Soft Computing and Computational Intelligence 11<sup>th</sup> Internat. Fuzzy Systems Assoc. World Congress Vol. 3 (2005) 382-387 Co-authors P. Chen and C. Hu

197. "Assessing Risk and Associated Cost of Risk in Product Development Setting: A Fuzzy Rule Based Model" Decision Science Institute 8<sup>th</sup> Internat. Conf. Of the Decision Sciences (2005) 355-366

198. "Paradigms for Decision-Making Under Increasing Levels of Uncertainty"

**International Journal of Pure and Applied Mathematics Vol 21,3 (2005) 419-430 Co-authors F. Modave and R.Kleyle**

**199.” Managing Risks to Knowledge Transference in Information Systems: A Fuzzy Rule Based Model” 2005 IEEE International Engineering Management Conf. A Strategic View of Engineering and Technology Management, IEEE Engineering Management Society. Newfoundland, Canada 564-568.**

**200. “ Time Slice Allocation: A Fuzzy Set Approach” Proceedings of Neural, Parallel and Scientific Computations (3) 113-118; 2006  
Co-author O. Sirisaengtaksin**

**201. “Reinforcing Access Control Using Fuzzy Relation Equations” The 2006 World Congress in Computer Science, Computer Engineering and Applied Computing.  
Co-author A. Berrached**

**202. “ Information Preloading Strategies for E-Government Sites Based on User’s Stated Preferences”  
J. of Enterprise Information Management Vol. 20(1) (2007) 119-131.  
Co-authors S. Hashemi and G. Quirchmayr**

**203. “Resource Allocation Based On Imprecise Information” Journal of Neural, Parallel and Scientific Computations Vol 15(1) (2007) 91-102.  
Co-authors P. Simeonov and O. Sirisaengtaksin**

**204. “Using the Fuzzy Analytic Hierarchical Process to Select the Optimum Mechanism for Developing Accounting Standards” Review of Accounting and Finance Vol 2 (2007) 109-130.  
Co-authors M. Bayou and A. Reinstein.**

**205. “A Gentle Introduction to Fuzzy Logic and its Applications to Intelligent Agents Design”, in Architectural Design of Multi- Agent Systems; Publisher Premier Reference Source (2007) 61-93  
Co-Authors P. Simeonov and H. Lin**

**206.”Using The Body of Evidence Approach for Optimal Drug Dosage”, Journal of Fuzzy Mathematics, Vol 15, No. 4, ( 2007) 865-873.  
Co-Author Jeong-Mi Yoon**

**207. “Information Retrieval Using Relevance Vectors: A Soft Computing Approach” , Internt. Of Pure and Applied Mathematics. Vol. 44, 1 (2008) 51-62.  
Co-Authors Ping Chen and Jeong-Mi Yoon**

**208.“ Using Fuzzy Logic Based Evidence For Bulgarian Winery Market Competiveness NorthAmericanFuzzy Information Processing. May 2008 ( New-York) 6 pages.  
Co-authors M. Shipley and D. Olson**

**209. Knowledge Processing With Interval and Soft Computing. Publisher Springer, 2008.  
Contributing Editors A. de Korvin, C. Hu, B. Kearfott and V. Krienovich**

210. "Accounting for Fuzzy Lean Manufacturing Systems" Accepted for Publication in the Journal of Engineering and Technology Management  
Co-author M. Bayou

### GRANT EXPERIENCE

"A generalized information system: decision making, stopping times, updating schemes and goal uncertainty." Funded by NSF 1983-1986.  
Co-principal investigator with R. Kleyle.

"Value and effectiveness of information as related to decision making." Funded by NSF 1983-1985. On 25% release time during the academic year.  
Joint work with M. Yovits.

"Modeling goal uncertainty and goal shaping in a generalized information system." Funded by NSF 1986-1987  
Co-principal investigator with R. Kleyle.

Additional support for "Modeling goal uncertainty." Funded by NSF 1987.

NASA/ASEE Summer Faculty Fellow 1988.

NASA/ASEE Summer Faculty Fellow 1989.

NASA grant, Summer 1990.

NASA grant, Summer 1991.

"Using Rough Sets for Knowledge Acquisition" funded by NASA 1991-1992.

"Improvement of Undergraduate Education and Research in Computer Science" funded by NSF 1992-1993.

"Parallel and Distributed Evaluation, Visualization, and AI Reasoning Applied to Advanced Distributed Interactive Simulation Technology" funded by the Army Research Consortium Program 1995-1990.

"Improving Research and Undergraduate Education in Computer Science" funded by NSF 1995-1999.

### ADMINISTRATIVE EXPERIENCE

Acting Chairman Purdue School of Science at Indianapolis  
Computer and Information Science Department  
July 1986 - June 1987

Chairman Purdue School of Science at Indianapolis  
Computer and Information Science Department  
1987 - 1987

### DISSERTATION EXPERIENCE

In 1968 while visiting at Indiana State University, I became the advisor of Charles Cheney, a Ph. D.

candidate at Carnegie-Mellon University. Charles came to teach at Indiana State University in 1969, finished his thesis in 1971 and continued to teach at Indiana State University till 1985. His thesis was in the general area of operator theory. Our cooperation went well beyond the thesis itself and led to several joint papers ,see [15], [22] and [26]. At Indiana State I did not have the opportunity to be involved in advising Ph. D. candidates as the department did not have a Ph. D. program. However in 1975, I had the pleasure to advise M. Vo Van Tho on his Master's thesis at Indiana State University. His work was exceptionally strong for a Master's level thesis. With additional work we were able to extend our results and co-author three joint papers in the general area of non-linear analysis (Hammerstein operators).

From 1987, at the University of Houston-Downtown, I have directed over twenty senior projects, most of them in the areas of the mathematical theory of evidence and uncertainty in expert systems. (Typical methods used are the Bayesian approach, Fuzzy logic, Rough Sets and the Dempster-Shafer theory).

### REVIEWS

For several years I have served as a reviewer for Mathematical Reviews in the area of measure and integration, functional analysis, operator theory and probability theory.

In addition I have served as a referee for :

the Michigan J. of Mathematics

the J. of Multivariate Analysis

the Pacific J. of Mathematics

the London Math. Soc. J.

the Proc. of the Amer. Math. Soc.

the J. of The Amer. Soc. Info. Sci.

the J. of Approximate Reasoning

the IEEE Conference on Decision and Control

the North Amer. Fuzzy Info. Processing Soc.

the IEEE Transactions on Systems, Man, and Cybernetics

the J. of Intelligent Systems in Accounting Finance and Management

the International. J. of Neural, Parallel, and Scientific Comp.

the Journal of Fuzzy and Intelligent Systems

the Journal of the Operational Research Society

Applied Mathematics Letters

The IEEE Transactions on Engineering Management

Fuzzy Sets and Systems

The Journal of Non Linear Analysis

I have also reviewed NSF proposals in Information Sciences.

### UNIVERSITY AND DEPARTMENTAL SERVICES

The University Research Committee (1979-80, 1977-78, 1975-76, 1974-75)

The University Graduate Council (1978-79)

Chairperson of Mathematics Selection Committee (1978 -79)

Dean of Graduate Studies Selection Committee (1977-78)

Faculty Affairs Committee, College of Arts and Sciences (1978-79)

Departmental Promotion Committee (1979-80, 1978-79, 1977-78)

Sigma Xi Admission Committee (1979-80)

Chairman, Computer Science Personnel Committee (1980-1981)

Chairperson of Computer Science Selection Committee (1981-82, 1982-83)

The Dean's Advisory Committee (1983-84, 1984-85)

The University Research Committee (1984-85)

Faculty Affairs Committee (1984-85)

Liaison person with the Computer Science Department at Purdue University, West Lafayette (1984-85)

University Tenure and Promotion Committee (1984-85, 1986-87)  
Chairman, Computer Science Committee (1987-88)  
Computer Science Committee (1988-89)  
Qualitative Methods Committee (1988-89)  
Research Committee (1988-89)  
Mission Statement Committee (1988-89)  
Academic Computing Committee (1988-89)  
Faculty Affairs Committee (1989-90)  
Organized Research Committee (1989-90)  
Tenure and Promotion Committee (1989-90)  
Faculty Affairs Committee (1990-91)  
Distinguished Lecture Series Committee (1990-91)  
Focus Grievance Committee (1990-91)  
Distinguished Lecture Series Committee (1991-92)  
The Faculty Awards Committee (1992-93)  
The Faculty Senate (1994-95)  
The Senate Executive Committee (1994-95)  
The Faculty Senate (1995-97)  
The Department Proposal Committee (1997-98)  
Hearing Grievance Committee (1998-99)  
The Faculty Awards Committee (1998-99)  
The Faculty Awards Committee (1999-2000)  
The Focus Grievance Committee (2000-2001)  
The Senate Executive Committee (2001-2002)  
The Faculty Senate (2001-2002)  
The Senate Executive Committee (2004)  
The Faculty Senate (2004)  
The Grievance Committee ( Focus and Hearing) 2005-  
The Graduate Studies Committee 2007

#### **AWARDS/SPECIAL HONORS**

University of Houston-Downtown Excellence in Professional Service Award 1990.  
University of Houston-Downtown Excellence in Scholarship Award 1992.  
University of Houston-Downtown Teaching Award Finalist 1991, 1992.  
Keynote Speaker at the International EXPERSYS-92 Conference.  
Taught by invitation a short course in Mathematical Problems in Artificial Intelligence MAA Conference in Houston 1992.  
University of Houston-Downtown Enron Excellence in Teaching Award 1993.  
Keynote Paper at the International EXPERSYS-93 Conference.  
Member Of The Editorial Board Of The J. Of Managerial Finance 1997.  
Member of the Computer Science Accreditation Commission.  
University of Houston-Downtown Excellence in Scholarship Finalist 1998.  
University of Houston-Downtown Excellence in Scholarship Award 1999.  
Elected to the Phi-Kappa-Phi Society 2000.  
University of Houston-Downtown Excellence in Scholarship Award 2009.