

# Publications:

## Book(s)/Proceeding(s):

- 1) Wen-Ran Zhang, YinYang Bipolar Cognition and Decision. Working Book.
- 2) Wen-Ran Zhang, Yan-Qing Zhang and Xiaohua Tony Hu (eds.), "Proceedings of the 2005 IEEE ICDM Multiagent Data Warehousing and Multiagent Data Mining Workshop," ISBN 0-9738918-0-7, 2005.

## Journal Articles:

- 3) Wen-Ran Zhang et al, "YinYang Bipolar Prolog." Working Project and Paper.
- 4) Wen-Ran Zhang, "YinYang Bipolar T-norms and T-comorms as Granular Neurological Operators." To appear (based on IEEE GrC06 paper).
- 5) Wen-Ran Zhang, "YinYang Bipolar DeMorgan's Laws and Universal Modus Ponens for Neurological Data Mining." To appear.
- 6) Wen-Ran Zhang et al, "YinYang Bipolar Neurological Modeling and Diagnostic Analysis of Mental Depression and Disorder." To Appear.
- 7) Wen-Ran Zhang, "YinYang Bipolar Fuzzy Sets and Fuzzy Equilibrium Relations for Clustering, Optimization, and Global Regulation." *Int'l J. of Inf. Technology and Decision Making*, Vol. 5 No. 1: 19-46, March 2006.
- 8) Wen-Ran Zhang, "YinYang Bipolar Lattices and L-Sets for Bipolar Knowledge Fusion, Visualization, and Decision." *Int'l J. of Inf. Technology and Decision Making*, Vol. 4 No. 4: 641-646, Dec. 2005
- 9) Wen-Ran Zhang, "YinYang Bipolar Cognition and Bipolar Cognitive Mapping (Invited Paper)." *Int'l Journal of Computational Cognition*. Vol.3, No. 3, Sept. 2005, pp 52-64.
- 10) Wen-Ran Zhang and Lulu Zhang, "A Multiagent Data Warehousing (MADWH) and Multiagent Data Mining (MADM) Approach to Brain Modeling and NeuroFuzzy Control." *Information Sciences*, 167(1-4), 2004, pp109-127.
- 11) Wen-Ran Zhang and Lulu Zhang, "YinYang Bipolar Logic and Bipolar Fuzzy Logic." *Information Sciences*, Vol. 165(3-4), 2004, pp265-287.
- 12) Wen-Ran Zhang and Lulu Zhang, "Soundness and Completeness of a 4-Valued Bipolar Logic." *J. of Multiple-Valued Logic and Soft Computing*. Vol. 9, 2003, pp241-256.
- 13) Wen-Ran Zhang, "Equilibrium Relations and Bipolar Cognitive Mapping for Online Analytical Processing with Applications in International Relations and Strategic Decision Support." *IEEE Transactions on Systems, Man, and Cybernetics – Part B.*, Vol. 33, No. 2, pp.295-307, Apr. 2003.
- 14) Wen-Ran Zhang, "Equilibrium Energy and Stability Measures for Bipolar Decision and Global Regulation." *International Journal on Fuzzy Systems*. Vol. 5, No. 2, June 2003, pp114-122.
- 15) Wen-Ran Zhang, "Bipolar Sets and Fuzzy Sets for OLAP/OLAM." *Communications of Int'l Information Management Associations*, Vol. 2, Issue 2, 2002, pp1-11.
- 16) H. Lee, K. Li, J. L. Gossage, K. L. Chen, and W. Zhang, "An Engineering Knowledge-Based System for Supply Chain Management in Chemical Industry." *Communications of Int'l Information Management Associations*. Vol. 2, Issue 1, 2002, pp15-24.
- 17) W. Zhang, "Nesting, Safety, Layering, and Autonomy: A Reorganizable Multiagent Cerebellar Architecture for Intelligent Control – with Application In Legged Locomotion and Gymnastics." *IEEE Transactions on Systems, Man, and Cybernetics, Part B*, Vol. 28, No. 3, June 1998, pp357-375.
- 18) W. Zhang, "NPN Fuzzy Sets and NPN Qualitative-Algebra: A Computational Framework for Bipolar Cognitive Modeling and Multiagent Decision Analysis." *IEEE Transactions on Systems, Man, and Cybernetics*. Vol. Vol. 26, No. 8, 1996, pp561-575.
- 19) W. Zhang, "MAC-J: A Self-Organizing Multiagent - Cerebellar Model for Fuzzy-Neural Control of Uniped Robot Locomotion." *Int'l J. on Intelligent Control and Sys.*, Vol. 1, No. 3, 1996, pp339-354.
- 20) W. Zhang, W. Wang, and R. King, "An Agent-Oriented Open System Shell for Distributed Decision Process Modeling." *J. of Organizational Computing*, Vol. 4, No. 2, 1994, pp127-154.

- 21) W. Zhang, S. S. Chen, W. Wang, and R. King, "A Cognitive-Map-Based Approach to the Coordination of Distributed Cooperative Agents." *IEEE Transactions on Systems, Man, and Cybernetics*. Vol. 22, No. 1, 1992, pp103-114.
- 22) W. Zhang, S. S. Chen, and J. Bezdek, "POOL2: A Generic System for Cognitive Map Development and Decision Analysis." *IEEE Transactions on Systems, Man, and Cybernetics*. Vol. 19, No.1, 1989, pp31-39.
- 23) J. Wu, V. Van Brunt, W. Zhang, and J. Bezdek, "Tower Packing (Chemical) Evaluation Using Linguistic Variables." *Int'l Journal of Computer Mathematics with Applications*. Vol. 15, No.10, 1988, pp863-869.
- 24) W. Zhang, "POOL: A Semantic Model for Approximate Reasoning and Its Application in Decision Support." *J. of Management Information Systems*, Vol. 3, No.4, 1987, pp65-78. (Special issue of seven best papers with revisions from the Hawaii Int'l Conf. on Systems Sciences.)