











and gray information systems, evaluation in the uncertain state, and dynamic system evaluation. The comprehensive intelligent evaluation method is widely applied in the practical application because it is simple and effective; particularly in solving evaluation problems with complex structure; and it has the incomparable merits that traditional evaluation methods do not have; therefore, the comprehensive intelligent evaluation has attracted much attention from researchers. It can be seen from the research literatures in recent years, the application scope of comprehensive intelligent evaluation is getting wider and wider. The research on comprehensive intelligent evaluation keeps moving forward with further research on algorithm application. On the one hand, brand new progress has been achieved in the research of artificial intelligence theories; on the other hand, the computer technologies also realize leapfrog development. Many job tasks that cannot be completed before have been executed by now thanks to the continuous improvement of computer operation speed and the constant development of cloud intelligence and big data technology, which will promote the application of the intelligent methods in comprehensive evaluation.

#### ACKNOWLEDGMENT

This paper was funded by three projects: BIPT-POPME; Development Research Centre of Beijing New Modern Industrial Area (2016); BIPT-ER(2014); URT2017J00120.

#### REFERENCES

[1] Liu D, Yin YX, Tu XY, Dong J. (2005). An evaluation method on intelligent control system intelligent level. *Journal of Central South University Special* 13-16.

[2] Liu D, Yin YX, Tu XY. (2007). Research on generalized intelligent qualitative evaluation of intelligent system. *Computer Science* 34(9): 167-169.

[3] Huang W, Nie D, Chen YJ. (2001). The main school and characteristics in AI research. *Journal of Gannan Teachers College* (3): 73-75.

[4] Tu XY. (1994). Theories, methods and techniques of intelligent control, second national intelligent control expert seminar collected papers (1). Tsinghua University: 27-34.

[5] Cai ZX, Xu G. (2005). Artificial intelligence control. Beijing: Chemical Industry Press 3-20.

[6] Boser BE, Guyon IM, Vapnik VN. (1992). A training algorithm for optimal margin classifiers. *Proceedings of the 5th Annual ACM Workshop on Computational Learning Theory* 5: 144-152. <https://doi.org/10.1145/130385.130401>

[7] Wang ZJ. (1998). Methods, problems and research trends of comprehensive evaluation. *Journal of Management Sciences in China* 1(1): 73-79.

[8] Law R., Au N. (2000). Relationship modeling in tourism shopping: a decision rules induction approach. *Tourism*

*Management* 21(3): 241-249. [https://doi.org/10.1016/S0261-5177\(99\)00056-4](https://doi.org/10.1016/S0261-5177(99)00056-4)

[9] Wang Q, Wang XL. (2005). Research on text classification techniques integrated KNN and SVM. *Chinese High Technology Letters* 15(5): 19-24.

[10] Sun XJ. (2011). Research on coal mine safety expert index evaluation system. *Coal Economic Research* (3).

[11] Jing HF, Wang B, Yang YH, Xu Y. (2009). Category distribution-based feature selection framework. *Journal of computer research and development* 46(9): 1586-1593.

[12] Yang Y, Slattery S, Ghani R. (2002). A study of approaches to hypertext categorization. *Journal of Intelligent Information Systems* 18(2): 219-241. <https://doi.org/10.1023/A:1013685612819>

[13] Vapnik VN. (1999). An overview of statistical learning theory. *IEEE Transactions on Neural Networks* 10(5): 988-999. <https://doi.org/10.1109/72.788640>

[14] Burges CJC. (1999). Geometry and invariance in kernel based method. *Advances in Kernel Methods-Support Vector Learning*, Cambridge: MIT Press 89-116.

[15] Scholkopf B, Simard P, Smola A, Vapnik V. (2000). Prior knowledge in support vector kernels. *Advances in Neural Information Processing Systems* (12): 526-532.

[16] Campbell C, Cristianini N, Smola AJ. (2000). Query learning with large margin classifiers. *Proceedings of the 7th ICML, Stanford*, pp. 111-118.

[17] Lee YJ, Mangasarian OL. (2001). SSVM: A smooth support vector machine for classification. *Computational Optimization and Applications* 20(1): 5-22. <https://doi.org/10.1023/A:1011215321374>

[18] Chen W, Wang L, Geng G, Mao W, Li X. (2012). Domain name credit evaluation method based on machine learning. *Computer Application Research* 29(2): 690-692.

[19] Hopfield JJ. (1984). Neurons with graded response have collective computational properties like those of two-state neurons. *Proceedings of the National Academy of Sciences of the United States of America* 81(10): 3088. <https://doi.org/10.1073/pnas.81.10.3088>

[20] Guo ZW, Xu LC, Zhu LQ, Cao YH. (1992). Theories and methods of macroscopic quality evaluation, enterprise development and system engineering. Beijing: China Science and Technology Press: 147-150.

[21] Liao YL. (2010). Comparison of two CSI computing methods based on customer evaluation changes. *Mathematical Statistics and Management* 29(4): 743-753.

[22] Zhu XD, Feng TJ. (2003). Personal credit evaluation based on GA neural network. *System Engineering Theories and Practice* 23(3): 48-51.

[23] Huang YH., Zhu, JF. (2009). Research and application on projection pursuit cluster evaluation model based on accelerating genetic algorithm. *System Engineering* 27(11): 107-110.

[24] Ni SY, Pan D, Wu CF. (2003). Comprehensive evaluation research on fund performance based on genetic algorithm. *System Engineering* 21(2): 1-6.