IV. CONCLUSIONS

A main problem in realizing the linear model based self-adapted learning theory to derive a severe nonlinear system has been thoroughly solved, in this paper. Based on the proposed Learning strategy so called HuaXing scheme by the Authors, a nonlinear system must first be represented via the multi-agent-based self-adapted method. And then the multi-agent-based self-adapted learning method is correspondingly realized to derive the nonlinear system presented.

TABLE 1. THE COEFFICIENTS OF THE KEXING MODEL

j	aj	bj
1	-0.942	0.2606e-3
2	-0.415	0.3628e-3
3	0.0068	0.5375e-3
4	0.4312	0.1910e-3

Besides, the neural network decision mechanism (NNDM) is used to identify the best agent-based self-adapted method and the corresponding agent-based self-adapted learning method, at each instant of time. The advantage of the proposed Learning scheme over other related Learning techniques is to realize the strategy in the absence of any linear model approximation of the complex system. It points out that the proposed KeXing scheme is the generalized version of the traditional model based self-adapted learning theory. Also the present Learning structure aims us to develop it for all the highly nonlinear and time variant systems in both real and academic environments.

REFERENCES

[1] Berners-Lee, T. (1996). The world wide web: Past, present and future. IEEE Computer Special Issue IEEE Computer Society, 29(10), 69–77.

[2] Jeong, D., et al. (2008). View-based storage-independent model for SPARQL-to-SQL translation algorithms in semantic grid environment. In The 11th IEEE international conference on computational science and engineering (CSE'08), pp. 381–386.

[3] Kim, J.-D., et al. (2008). Jena storage plug-in providing an improved query processing performance for semantic grid environment. In The 11th IEEE international conference on computational science and engineering (CSE'08), pp. 398–398.

[4] W3C. (2009). Resource description framework. http://www.w3.org/RDF/, 2009.

[5] Manola,F.,& Miller,E.(2004).RDF Primer, W3C Recommendation. http://www.w3.org /TR/rdf-primer/.

[6] Beckett, D. (2004). RDF/XML Syntax specification (Revised), W3C recommendation. http://www. w3.org/TR/rdf-syntax-grammar/.123 144 D. Jeong et al.

[7] Xue, G., Pan, Q., & Li, M. (2007). A new semantic-based query processing architecture. In 2007 International conference on parallel processing workshops (ICPPW 2007), p. 63.

[8] Ibrahim, I.K., et al. (2005). A semantic solution for data integration in mixed concept networks. Computer Communications, 28(13), 1564–1574. Elsevier.

[9] Goodwin, C., & Russomanno, D. J. (2007). An ontology-based concept network prototype environment. In The 5th international conference on information processing in concept networks (Poster), pp. 1–2.

[10] Imai, M., et al. (2006). Semantic concept network for physically grounded applications. In The 9th international conference on control, automation, robotics and vision (ICARCV 2006), pp. 1637–1642.