List of Publications (November 19, 2009)

Books

1. K. Riesen and H. Bunke. Classification and Clustering of Vector Space Embedded Graphs. To appear in *Series in Machine Perception and Artifical Intelligence.* World Scientific.

Journal Articles and Book Chapters

2. H. Bunke and K. Riesen. On dissimilarity embedding of graphs in vector spaces. To appear in book *Handbook of Pattern Recognition and Computer Vision.*

3. K. Riesen, X. Jiang, and H. Bunke. Exact and inexact graph matching – methodology and applications. To appear in book *Managing and Mining Graph Data.*

4. M. Ferrer, E. Valveny, F. Serratosa, K. Riesen, and H. Bunke. Generalized Median Graph Computation by Means of Graph Embedding in Vector Spaces Accepted for publication in *Pattern Recognition.*

5. M. Neuhaus, K. Riesen, and H. Bunke. Novel kernels for error-tolerant graph classification. *Spatial Vision*, 22(5):425–441, 2009.

6. K. Riesen and H. Bunke. Graph classification by means of Lipschitz embedding. *IEEE Transactions on Systems, Man, and Cybernetics (Part B)*, 39(6):1472–1483, 2009.

7. K. Riesen and H. Bunke. Graph classification based on vector space embedding. *Int. Journal of Pattern Recognition and Artificial Intelligence*, 23(6):1053–1081, 2009.

8. K. Riesen and H. Bunke. Approximate graph edit distance computation by means of bipartite graph matching. *Image and Vision Computing*, 27(4):950–959, 2009.

9. H. Bunke and K. Riesen. Graph Edit Distance – Optimal and Suboptimal Algorithms with Applications. In M. Dehmer and F. Emmert-Streib, editors. *Analysis of Complex Networks: From Biology to Linguistics*, 113–143, 2009. Wiley-VCH, 2009.

10. K. Riesen and H. Bunke. Reducing the dimensionality of dissimilarity space embedding graph kernels. *Engineering Applications of Artificial Intelligence*, 22(1):48–56, 2008.

Conference Papers

11. K. Riesen and H. Bunke. Feature ranking algorithms for improving classification of vector space embedded graphs. In X. Jiang and N. Petkov, editors, *Proc. 13th International Conference on Computer Analysis of Images and Patterns*, LNCS 5702, pages 377–384, Springer, 2009.

12. K. Riesen, V. Frinken, and H. Bunke. Improving graph classification by isomap. In A. Torsello, F. Escolano, and L. Brun, editors, *Proc. 7th Int. Workshop on Graph Based Representations in Pattern Recognition*, LNCS 5534, pages 205–214, Springer, 2009.

13. K. Riesen, S. Fankhauser, and H. Bunke. Efficient Suboptimal Graph Isomorphism. In A. Torsello, F. Escolano, and L. Brun, editors, *Proc. 7th Int. Workshop on Graph Based Representations in Pattern Recognition*, LNCS 5534, pages 124–133, Springer, 2009.

14. K. Riesen and H. Bunke. Dissimilarity based vector space embedding of graphs using prototype reduction schemes. In P. Perner, editor, *Proc. 6th International Conference on Machine Learning and Data Mining in Pattern*, LNCS 5632, pages 617–631, Springer, 2009.

15. K. Riesen and H. Bunke. Cluster ensembles based on vector space embeddings of graphs. In J. A. Benediktsson, J. Kittler, and F. Roli, editors, *Proc. 8th International Workshop on Multiple Classifier Systems*, LNCS 5519, pages 211–221, Springer, 2009.

16. K. Riesen and H. Bunke. Kernel k-means clustering applied to vector space embeddings of graphs. In L. Prevost, S. Marinai, and F. Schwenker, editors, *Proc. 3rd IAPR Workshop Artificial Neural Networks in Pattern Recognition*, LNAI 5064, pages 24–35. Springer, 2008.

17. A. Brügger, H. Bunke, P. Dickinson, and K Riesen. Generalized graph matching for data mining and information retrieval. In P. Perner, editor, *Advances in Data Mining. Medical Applications, E-Commerce, Marketing, and Theoretical Aspects*, LNCS 5077, pages 298–312. Springer, 2008.

18. M. Ferrer, E. Valveny, F. Serratosa, K Riesen, and H. Bunke. An approximate algorithm for median graph computation using graph embedding. In *Proc. 19th Int. Conf. on Pattern Recognition*. IEEE, 2008.

19. A. Fischer, K. Riesen, and H. Bunke. An experimental study of graph classification using prototype selection. In *Proc. 19th Int. Conf. on Pattern Recognition*. IEEE, 2008.

20. K. Riesen and H. Bunke. On Lipschitz embeddings of graphs. In I. Lovrek, R.J. Howlett, and L.C. Jain, editors, *Proc. 12th International Conference, Knowledge-Based Intelligent Information and Engineering Systems, Part I*, LNAI 5177, pages 131–140. Springer, 2008.

21. K. Riesen and H. Bunke. Non-linear transformations of vector space embedded graphs. In A. Juan-Ciscar and G. Sanchez-Albaladejo, editors, *Pattern Recognition in Information Systems*, pages 173–186, 2008.

22. H. Bunke and K. Riesen. Recent developments in graph classification and clustering using graph embedding kernels. In A. Juan-Ciscar and G. Sanchez-Albaladejo, editors, *Pattern Recognition in Information Systems*, pages 3—13, 2008.

23. K. Riesen and H. Bunke. IAM graph database repository for graph based pattern recognition and machine learning. In N. da Vitoria Lobo et al., editor, *Structural, Syntactic, and Statistical Pattern Recognition*, LNCS 5342, pages 287–297, Springer, 2008.

24. H. Bunke and K. Riesen. Graph classification based on dissimilarity space embedding. In N. da Vitoria Lobo et al., editor, *Structural, Syntactic, and Statistical Pattern Recognition*, LNCS 5342, pages 996–1008, Springer, 2008.

25. H. Bunke and K. Riesen. A family of novel graph kernels for structural pattern recognition. In L. Rueda, D. Mery, and J. Kittler, editors, *Proc. 12th Iberoamerican Congress on Pattern Recognition*, LNCS 4756, pages 20–31, Springer, 2007.

26. K. Riesen, M. Neuhaus, and H. Bunke. Bipartite graph matching for computing the edit distance of graphs. In F. Escolano and M. Vento, editors, *Proc. 6th Int. Workshop on Graph Based Representations in Pattern Recognition*, LNCS 4538, pages 1–12, Springer, 2007.

27. K. Riesen, M. Neuhaus, and H. Bunke. Graph embedding in vector spaces by means of prototype selection. In F. Escolano and M. Vento, editors, *Proc. 6th Int. Workshop on Graph Based Representations in Pattern Recognition*, LNCS 4538, pages 383–393, Springer, 2007.

28. K. Riesen and H. Bunke. Structural classifier ensembles for vector space embedded graphs. In *Proc. 20th Int. Joint Conf. on Neural Networks*, pages 1500–1505, 2007.

29. K. Riesen and H. Bunke. Classifier ensembles for vector space embedding of graphs. In M. Haindl, J. Kittler, and F. Roli, editors, *Proc. 7th Int. Workshop on Multiple Classifier Systems*, LNCS 4472, pages 220–230, Springer, 2007.

30. K. Riesen, V. Kilchherr, and H. Bunke. Reducing the dimensionality of vector space embeddings of graphs. In P. Perner, editor, *Proc. 5th Int. Conf. on Machine Learning and Data Mining*, LNAI 4571, pages 563–573. Springer, 2007.

31. K. Riesen, S. Fankhauser, and H. Bunke. Speeding up graph edit distance computation with a bipartite heuristic. In P. Frasconi, K. Kersting, and K. Tsuda, editors, *Proc. 5th. Int. Workshop on Mining and Learning with Graphs*, pages 21–24, 2007.

32. M. Neuhaus, K. Riesen, and H. Bunke. Fast suboptimal algorithms for the computation of graph edit distance. In Dit-Yan Yeung, J.T. Kwok, A. Fred, F. Roli, and D. de Ridder, editors, *Proc. 11.th int. Workshop on Strucural and Syntactic Pattern Recognition*, LNCS 4109, pages 163–172. Springer, 2006.

Articles under Review

33. S. Fankhauser, K. Riesen and H. Bunke. Suboptimal Graph Isomorphism Using Bipartite Matching.

34. H. Bunke and K. Riesen. Graph based-Representations in Document Analysis.

35. K. Riesen and H. Bunke. Feature Selection applied to Vector Space Embedded Graphs.