

Publications List

Johannes Fürnkranz

The key publications can be categorized into **inductive rule learning** [4, 20, 22, 31, 34, 37, 38, 40, 44, 51, 56, 159], **preference learning** [5, 12, 19, 21, 25, 27, 28, 77, 93, 94], **reinforcement learning** [18, 46, 47, 121] **semantic web and web mining** [50, 23, 24, 33, 35, 84, 99, 98, 104], **game playing** [6, 16, 26, 29, 42, 59, 83, 103, 126], and **data mining in the social sciences** [30, 36, 41, 101, 102]. Particularly noteworthy are a **monograph** on inductive rule learning [4], and two **edited collections** on preference learning [5] and machine learning for game playing [6].

The **most cited publications** are [34, 37, 89], which all show more than 300 citations in Google Scholar, eleven more are cited 100 times or more [27, 40, 31, 84, 77, 75, 5, 28, 104, 181, 40]. My **h-Index** in Google Scholar is **34**, i.e., 34 publications have received 34 or more citations (cf. <http://scholar.google.de/citations?user=sfTn4wEAAAAJ>).

Most publications are available from <http://www.ke.tu-darmstadt.de/staff/juffi/publications>.

Academic Writings

- [1] Fürnkranz J. *Inductive Rule Learning for Data and Web Mining*. Habilitation thesis, Vienna University of Technology, 2001.
- [2] Fürnkranz J. *Efficient Pruning Methods for Relational Learning*. PhD thesis, Vienna University of Technology, 1994.
- [3] Fürnkranz J. *Induktives Lernen durch Generieren von Decision Trees*. Master's thesis, Vienna University of Technology, 1991. In German.

Monograph

- [4] Fürnkranz J., Lavrač N., and Gamberger D. *Foundations of Rule Learning*. Springer-Verlag, 2012.

Edited Books

- [5] Fürnkranz J. and Hüllermeier E. (eds.) *Preference Learning*. Springer-Verlag, 2010.
- [6] Fürnkranz J. and Kubat M. (eds.) *Machines that Learn to Play Games*. Nova Science Publishers, Huntington, NY, 2001.

Edited Conference Proceedings

- [7] Fürnkranz J., Hüllermeier E., Rudin C., Słowinski R., and Sanner S. (eds.) *Preference Learning* (Dagstuhl Seminar 14101). *Dagstuhl Reports*, 4(3), 2014.
- [8] Fürnkranz J., Hüllermeier, E., and Higuchi, T. (eds.) *Discovery Science: DS 2013*, Lecture Notes in Artificial Intelligence 8140, Singapore, 2013. Springer-Verlag.
- [9] Fürnkranz J. and Joachims T. (eds.) *Proceedings of the 27th International Conference on Machine Learning (ICML 2010)*, Haifa, Israel, 2010. Omnipress.
- [10] Fürnkranz J., Scheffer T., and Spiliopoulou M. (eds.) *Machine Learning: ECML 2006*, Lecture Notes in Artificial Intelligence 4212, Berlin Germany, September 2006. Springer-Verlag.

- [11] Fürnkranz J., Scheffer T., and Spiliopoulou M. (eds.) *Knowledge Discovery in Databases: PKDD 2006*, Lecture Notes in Artificial Intelligence 4213, Berlin Germany, September 2006. Springer-Verlag.

Edited Special Issues

- [12] Hüllermeier E. and Fürnkranz J. (eds.) Special Issue on Preference Learning and Ranking. *Machine Learning*, 93(2-3), 2013.
- [13] Fürnkranz J., and Knobbe A. (eds.) Special Issue on Global Modeling using Local Models. *Data Mining and Knowledge Discovery*, 21(1), 2010.
- [14] Bowling M., Fürnkranz J., Graepel T., and Musick R. (eds.) Special Issue on Machine Learning and Games. *Machine Learning*, 63(3), June 2006.
- [15] Fürnkranz J. and Pfahringer B. (eds.) Special Issue on First-order Knowledge Discovery in Databases. *Applied Artificial Intelligence*, 12(5), 1998.

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- [16] Wirth C. and Fürnkranz J. On learning from game annotations. *IEEE Transactions on Computational Intelligence and AI in Games*, 2015. in press.
- [17] Park S.-H. and Fürnkranz J. Efficient implementation of class-based decomposition schemes for Naïve Bayes. *Machine Learning*, 96(3):295–309, 2014. Technical Note.
- [18] Fürnkranz J., Hüllermeier E., Cheng W., and Park S.-H. Preference-based reinforcement learning: a formal framework and a policy iteration algorithm. *Machine Learning*, 89(1-2):123–156, 2012. Special Issue on ECML/PKDD 2011.
- [19] Park S.-H. and Fürnkranz J. Efficient prediction algorithms for binary decomposition techniques. *Data Mining and Knowledge Discovery*, 24(1):40–77, 2012.
- [20] Wohlrab L. and Fürnkranz J. A review and comparison of strategies for handling missing values in separate-and-conquer rule learning. *Journal of Intelligent Information Systems*, 36(1):73–98, 2011.
- [21] Fürnkranz J. and Sima J.-F. On exploiting hierarchical label structure with pairwise classifiers. *SIGKDD Explorations*, 12(2):21–25, 2010. Special Issue on Mining Unexpected Results.
- [22] Janssen F. and Fürnkranz J. On the quest for optimal rule learning heuristics. *Machine Learning* 78(3):343–379, 2010.
- [23] Ghiglieri M. and Fürnkranz J. Learning to recognize missing e-mail attachments. *Applied Artificial Intelligence*, 24(5):443–462, 2010.
- [24] Loza Mencía E., Park S.-H., and Fürnkranz J. Efficient voting prediction for pairwise multilabel classification. *Neurocomputing* 73(7-9):1164–1176, 2010.
- [25] Hüllermeier E. and Fürnkranz J. On predictive accuracy and risk minimization in pairwise label ranking. *Journal of Computer and System Sciences* 76(1):49–62, 2010.
- [26] Droste S. and Fürnkranz J., Learning the piece values for three chess variants. *International Computer Games Association Journal*, 19(4):209–233, 2008.
- [27] Hüllermeier E., Fürnkranz J., Cheng W., and Brinker K. Label ranking by learning pairwise preferences. *Artificial Intelligence*, 172:1897–1916, 2008.

- [28] Fürnkranz J., Hüllermeier E., Loza Mencía E., and Brinker K. Multilabel Classification via Calibrated Label Ranking, *Machine Learning*, 73(2):133–153, 2008.
- [29] Bowling M., Fürnkranz J., Graepel T., and Musick R. Guest editorial: Machine learning and games. *Machine Learning*, 63(3):211–215, June 2006.
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- [34] Fürnkranz J. Round Robin Classification. *Journal of Machine Learning Research* 2:721–747, 2002.
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Articles in Peer Reviewed Conference Proceedings

- [43] Brinker C., Loza Mencía E., and Fürnkranz J. Graded multilabel classification by pairwise comparisons. In *Proceedings of the International Conference on Data Mining (ICDM-14)*, pp. 731–736, Shenzhen, China, December 2014. IEEE.
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