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Publications

1. Edited scientific volumes and conference proceedings

- 1.1. P. Myllymäki, T. Roos and T. Jaakkola (eds.), Proceedings of the Fifth European Workshop on Probabilistic Graphical Models (PGM'2010), Helsinki, September 2010. HIIT Publications 2010-2.
- 1.2. K. Yamanishi, I. Kontoyiannis, E. Liski, P. Myllymäki, J. Rissanen and I. Tabus (eds.), Proceedings of the Third Workshop on Information Theoretic Methods in Science and Engineering. TICSP series 55, Tampere International Center for Signal Processing, 2010.
- 1.3. J. Heikkonen, I. Kontoyiannis, E. Liski, P. Myllymäki, J. Rissanen and I. Tabus (eds.), Proceedings of the Second Workshop on Information Theoretic Methods in Science and Engineering. TICSP series 49, Tampere International Center for Signal Processing, 2009.
- 1.4. D. McAllester and P. Myllymäki (eds.), *Proceedings of the 24th Conference on Uncertainty in Artificial Intelligence* (UAI 2008), July 2008, Helsinki, Finland. AUAI Press, 2008.
- 1.5. J. Heikkonen, I. Kontoyiannis, E. Liski, P. Myllymäki, J. Rissanen and I. Tabus (eds.), Proceedings of the First Workshop on Information Theoretic Methods in Science and Engineering. TICSP Series #43, Tampere International Center for Signal Processing, 2008.
- 1.6. P. Grünwald, P. Myllymäki, I. Tabus, M. Weinberger and B. Yu (eds.), *Festschrift in Honour of Jorma Rissanen*. TICSP Series #38, Tampere International Center for Signal Processing, 2008. Presented at the 2008 IEEE Information Theory Workshop.

2. Book chapters (edited and refereed)

- 2.1. P. Myllymäki, T. Roos, T. Silander, P. Kontkanen and H. Tirri, Factorized NML Models. Chapter 11 in *Festschrift in Honour of Jorma Rissanen*, edited by P. Grünwald, P. Myllymäki, I. Tabus, M. Weinberger and B. Yu. TICSP Series #38, 2008.

- 2.2. P.Kontkanen, P.Myllymäki, W.Buntine, J.Rissanen, H.Tirri, An MDL Framework for Data Clustering. In *Advances in Minimum Description Length: Theory and Applications*, edited by P. Grünwald, I.J. Myung and M. Pitt. The MIT Press, 2005.
- 2.3. P.Kontkanen, P.Myllymäki, T.Roos, H.Tirri, K.Valtonen, H.Wettig, Probabilistic Methods for Location Estimation in Wireless Networks. Chapter 11 in *Emerging Location Aware Broadband Wireless Adhoc Networks*, edited by R.Ganesh, S.Kota, K.Pahlavan and R.Agustí. Kluwer Academic Publishers, 2004
- 2.4. P.Kontkanen, P.Myllymäki, T.Silander, and H.Tirri, On the Accuracy of Stochastic Complexity Approximations. Chapter 9 in *Causal Models and Intelligent Data Management*, edited by A.Gamerman. Springer-Verlag, 1999.
- 2.5. P. Myllymäki and H. Tirri, Constructing Computationally Efficient Bayesian Models via Unsupervised Clustering. Pp. 237-248 in *Probabilistic Reasoning and Bayesian Belief Networks*, edited by A.Gamerman. Alfred Waller Publishers, Suffolk 1995.
- 2.6. P. Myllymäki and H. Tirri, Massively Parallel Case-Based Reasoning with Probabilistic Similarity Metrics. Pp. 144-154 in *Topics in Case-Based Reasoning*, edited by S.Wess, K.-D.Althoff and M.Richter. Lecture Notes in Artificial Intelligence, Volume 837. Springer Verlag, 1994.

3. Articles in refereed international journals

- 3.1. J. Perkiö, A. Tuominen, T. Vähäkangas and P. Myllymäki, Image Similarity: From Syntax to Weak Semantics. *Multimedia Tools and Applications*, DOI: 10.1007/s11042-010-0562-7, July 14, 2010.
- 3.2. T. Silander, T. Roos, and P. Myllymäki, Learning Locally Minimax Optimal Bayesian Networks, *International Journal of Approximate Reasoning* 51 (2010) 5 (June), 544-557.
- 3.3. J. Rissanen, T. Roos, and P. Myllymäki, Model Selection by Sequentially Normalized Least Squares, *Journal of Multivariate Analysis* 101 (2010) 4 (April), 839-849.
- 3.4. T. Roos, J. Rissanen and P. Myllymäki, MDL Denoising Revisited. *IEEE Trans. Signal Processing* 57 (2009) 9 (September), 3347-3360.
- 3.5. P. Kontkanen, H. Wettig and P. Myllymäki, NML Computation Algorithms for Tree-Structured Multinomial Bayesian Networks. *EURASIP Journal on Bioinformatics and Systems Biology*, Volume 2007 (2007), Article ID 90947, 11 pages.
- 3.6. J. Rissanen, P. Grünwald, J. Heikkonen, P. Myllymäki, T. Roos, J. Rousu, Information Theoretic Methods for Bioinformatics, guest editorial for a special issue of the *EURASIP Journal on Bioinformatics and Systems Biology*, Volume 2007 (2007).

- 3.7. H. Wettig, P. Kontkanen and P. Myllymäki, Calculating the Normalized Maximum Likelihood Distribution for Bayesian Forests. *IADIS International Journal on Computer Science and Information Systems* 2 (2007) 2 (October).
- 3.8. P. Kontkanen and P. Myllymäki, A linear-time algorithm for computing the multinomial stochastic complexity. *Information Processing Letters* 103 (2007) 6 (September), 227-233.
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- 3.13. P. Kontkanen, J. Lahtinen, P. Myllymäki, T. Silander, and H. Tirri, Supervised Model-Based Visualization of High-Dimensional Data. *Intelligent Data Analysis* 4 (2000), 213-227.
- 3.14. P. Kontkanen, P. Myllymäki, T. Silander, H. Tirri, and P. Grünwald, On Predictive Distributions and Bayesian Networks. *Statistics and Computing* 10 (2000), 39-54.
- 3.15. P. Myllymäki, Massively Parallel Probabilistic Reasoning with Boltzmann Machines. *Applied Intelligence* 11, 31-44 (1999).
- 3.16. P. Floréen, P. Myllymäki, P. Orponen, and H. Tirri, Compiling object declarations into connectionist networks. *AI Communications* 3 (1990) 4 (December), 172-183.

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- 4.1. J. Perkiö, A. Tuominen and P. Myllymäki, Image Similarity: From Syntax to Weak Semantics using Multimodal Features with Application to Multimedia Retrieval. Pp. 213-219 in Proceedings of the 2009 International Conference on Multimedia Information Networking and Security. IEEE Computer Society, 2009.
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- 4.5. E. Elovaara and P. Myllymäki, MDL-based attribute models in naive Bayes classification. In Proceedings of the Second Workshop on Information Theoretic Methods in Science and Engineering, edited by J. Heikkonen, I. Kontoyiannis, E. Liski, P. Myllymäki, J. Rissanen and I. Tabus. TICSP series 49, Tampere International Center for Signal Processing, 2009.
- 4.6. T. Silander, T. Roos, and P. Myllymäki, Locally Minimax Optimal Predictive Modeling with Bayesian Networks. Pp. 504-511 in Proceedings of the 12th International Conference on Artificial Intelligence and Statistics, edited by D. van Dyk and M. Welling. JMLR Workshop and Conference Proceedings, Volume 5: AISTATS 2009.
- 4.7. T. Mononen and P. Myllymäki, On Recurrence Formulas for Computing the Stochastic Complexity. Pp. 281-286 in Proceedings of the 2008 International Symposium on Information Theory and its Applications (ISITA2008), 7th-10th December 2008, Auckland, New Zealand.
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- 4.9. P. Myllymäki, Recent advances in computing the NML for discrete Bayesian networks. In Proceedings of the First Workshop on Information Theoretic Methods in Science and Engineering, edited by J. Heikkonen, I. Kontoyiannis, E. Liski, P. Myllymäki, J. Rissanen and I. Tabus. TICSP Series #43, Tampere International Center for Signal Processing, 2008.
- 4.10. T. Silander, T. Roos, P. Kontkanen, and P. Myllymäki, Factorized NML Criterion for Learning Bayesian Network Structures. Pp. 257-264 in Proceedings of the 4th European Workshop on Probabilistic Graphical Models (PGM-08), edited by M. Jaeger and T. Nielsen. September 17-19, Hirtshals, Denmark.
- 4.11. T. Mononen and P. Myllymäki, Computing the Multinomial Stochastic Complexity in Sub-Linear Time. Pp. 209-216 in Proceedings of the 4th European Workshop on Probabilistic Graphical Models (PGM-08), edited by M. Jaeger and T. Nielsen. September 17-19, Hirtshals, Denmark.
- 4.12. P. Kontkanen and P. Myllymäki, An Empirical Comparison of NML Clustering Algorithms. In *Proceedings of the 2008 International Conference on Information Theory and Statistical Learning (ITSL 2008)*.

- 4.13. T. Mononen and P. Myllymäki, On the Multinomial Stochastic Complexity and its Connection to the Birthday Problem. In *Proceedings of the 2008 International Conference on Information Theory and Statistical Learning (ITSL 2008)*.
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- 4.15. T. Mononen and P. Myllymäki, Computing the NML for Bayesian Forests via Matrices and Generating Polynomials. Pp. 276-280 in *Proceedings of the IEEE Information Theory Workshop 2008 (ITW-08)*.
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- 4.18. T. Silander and P. Kontkanen and P. Myllymäki, On Sensitivity of the MAP Bayesian Network Structure to the Equivalent Sample Size Parameter. Pp. 360-367 in the *Proceedings of the The 23rd Conference on Uncertainty in Artificial Intelligence (UAI-2007)*, edited by R. Parr and L. van der Gaag. AUAI Press, 2007.
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 - 4.25. P. Kontkanen, P. Myllymäki, A Fast Normalized Maximum Likelihood Algorithm for Multinomial Data. Pp. 1613-1616 in *Proceedings of the 19th International Joint Conference on Artificial Intelligence (IJCAI-05)*.
 - 4.26. S. Kaski, P. Myllymäki, and I. Kojo: User models from implicit feedback for proactive information retrieval. In C. de la Higuera and T. Artieres, editors, *Proceedings of Workshop 4 of the 10th International Conference on User Modeling; Machine Learning for User Modeling: Challenges*, pages 25-26, 2005.
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