## REFERENCES

[1] L. F. Abbott, J. A. Varela, K. Sen and S. B. Nelson. Synaptic depression and cortical gain control. Science, 275:220-223, 1997.
[2] D. H. Ackley, G. E. Hinton and T. J. Sejnowski. A learning algorithm for Boltzmann machines. Cognitive Science, 9:147-169, 1985.
[3] R. P. Adams and D. J. C. MacKay. Bayesian online changepoint detection. Cavendish Laboratory, Department of Physics, University of Cambridge, 2006.
[4] E. Airoldi, D. Blei, E. Xing and S. Fienberg. A latent mixed membership model for relational data. In LinkKDD '05: Proceedings of the 3rd International Workshop on Link Discovery, pages 82-89. ACM, 2005.
[5] E. M. Airoldi, D. M. Blei, S. E. Fienberg and E. P. Xing. Mixed membership stochastic blockmodels. Journal of Machine Learning Research, 9:1981-2014, 2008.
[6] D. L. Alspach and H. W. Sorenson. Nonlinear Bayesian estimation using Gaussian sum approximations. IEEE Transactions on Automatic Control, 17(4):439-448, 1972.
[7] S-i. Amari. Natural gradient learning for over and under-complete bases in ICA. Neural Computation, 11:1875-1883, 1999.
[8] I. Androutsopoulos, J. Koutsias, K. V. Chandrinos and C. D. Spyropoulos. An experimental comparison of naive Bayesian and keyword-based anti-spam filtering with personal e-mail messages. In Proceedings of the 23 rd Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, pages 160-167. ACM 2000.
[9] S. Arora and C. Lund. Hardness of approximations. In Approximation Algorithms for NP-Hard Problems, pages 399-446. PWS Publishing Co., 1997.
[10] F. R. Bach and M. I. Jordan. Thin junction trees. In T. G. Dietterich, S. Becker and Z. Ghahramani, editors, Advances in Neural Information Processing Systems (NIPS), number 14, pages 569-576. MIT Press, 2001.
[11] F. R. Bach and M. I. Jordan. A probabilistic interpretation of canonical correlation analysis. Computer Science Division and Department of Statistics 688, University of California Berkeley, Berkeley, USA, 2005.
[12] Y. Bar-Shalom and Xiao-Rong Li. Estimation and Tracking: Principles, Techniques and Software. Artech House, 1998.
[13] D. Barber. Dynamic Bayesian networks with deterministic tables. In S. Becker, S. Thrun and K. Obermayer, editors, Advances in Neural Information Processing Systems (NIPS), number 15, pages 713-720. MIT Press, 2003.
[14] D. Barber. Learning in spiking neural assemblies. In S. Becker, S. Thrun and K. Obermayer, editors, Advances in Neural Information Processing Systems (NIPS), number 15, pages 149-156. MIT Press, 2003.
[15] D. Barber. Are two classifiers performing equally? A treatment using Bayesian hypothesis testing. IDIAP-RR 57, IDIAP, Rue de Simplon 4, Martigny, CH-1920, Switzerland, May 2004. IDIAP-RR 04-57.
[16] D. Barber. The auxiliary variable trick for deriving Kalman smoothers. IDIAP-RR 87, IDIAP, Rue de Simplon 4, Martigny, CH-1920, Switzerland, December 2004. IDIAP-RR 04-87.
[17] D. Barber. Expectation correction for smoothing in switching linear Gaussian state space models. Journal of Machine Learning Research, 7:2515-2540, 2006.
[18] D. Barber. Clique matrices for statistical graph decomposition and parameterising restricted positive definite matrices. In D. A. McAllester and P. Myllymaki, editors, Uncertainty in Artificial Intelligence, number 24, pages 26-33. AUAI Press, 2008.
[19] D. Barber and F. V. Agakov. Correlated sequence learning in a network of spiking neurons using maximum likelihood. Informatics Research Reports EDI-INF-RR-0149, Edinburgh University, 2002.
[20] D. Barber and F. V. Agakov. The IM algorithm: a variational approach to information maximization. In Advances in Neural Information Processing Systems (NIPS), number 16, 2004.
[21] D. Barber and C. M. Bishop. Bayesian model comparison by Monte Carlo chaining. In M. C. Mozer, M. I. Jordan and T. Petsche, editors, Advances in Neural Information Processing Systems (NIPS), number 9, pages 333-339. MIT Press, 1997.
[22] D. Barber and C. M. Bishop. Ensemble learning in Bayesian neural networks. In Neural Networks and Machine Learning, pages 215-237. Springer, 1998.
[23] D. Barber and S. Chiappa. Unified inference for variational Bayesian linear Gaussian state-space models. In B. Schölkopf, J. Platt and T. Hoffman, editors, Advances in Neural Information Processing Systems (NIPS), number 19, pages 81-88. MIT Press, 2007.
[24] D. Barber and W. Wiegerinck. Tractable variational structures for approximating graphical models. In M. S. Kearns, S. A. Solla and D. A. Cohn, editors, Advances in Neural Information Processing Systems (NIPS), number 11, pages 183-189. MIT Press, 1999.
[25] D. Barber and C. K. I. Williams. Gaussian processes for Bayesian classification via hybrid Monte Carlo. In M. C. Mozer, M. I. Jordan and T. Petsche, editors, Advances in Neural Information Processing Systems NIPS 9, pages 340-346. MIT Press, 1997.
[26] R. J. Baxter. Exactly Solved Models in Statistical Mechanics. Academic Press, 1982.
[27] M. J. Beal, F. Falciani, Z. Ghahramani, C. Rangel and D. L. Wild. A Bayesian approach to reconstructing genetic regulatory networks with hidden factors. Bioinformatics, 21:349-356, 2005.
[28] A. Becker and D. Geiger. A sufficiently fast algorithm for finding close to optimal clique trees. Artificial Intelligence, 125(1-2):3-17, 2001.
[29] A. J. Bell and T. J. Sejnowski. An information-maximization approach to blind separation and blind deconvolution. Neural Computation, 7(6):1129-1159, 1995.
[30] R. E. Bellman. Dynamic Programming. Princeton University Press, 1957. Paperback edition by Dover Publications (2003).
[31] Y. Bengio and P. Frasconi. Input-output HMMs for sequence processing. IEEE Transactions on Neural Networks, 7:1231-1249, 1996.
[32] A. L. Berger, S. D. Della Pietra and V. J. D. Della Pietra. A maximum entropy approach to natural language processing. Computational Linguistics, 22(1):39-71, 1996.
[33] J. O. Berger. Statistical Decision Theory and Bayesian Analysis. Springer, second edition, 1985.
[34] D. P. Bertsekas. Nonlinear Programming. Athena Scientific, 2nd edition, 1999.
[35] D. P. Bertsekas. Dynamic Programming and Optimal Control. Athena Scientific, second edition, 2000.
[36] J. Besag. Spatial interactions and the statistical analysis of lattice systems. Journal of the Royal Statistical Society, Series B, 36(2):192-236, 1974.
[37] J. Besag. On the statistical analysis of dirty pictures. Journal of the Royal Statistical Society, Series B, 48:259-302, 1986.
[38] J. Besag and P. Green. Spatial statistics and Bayesian computation. Journal of the Royal Statistical Society, Series B, 55:25-37, 1993.
[39] G. J. Bierman. Measurement updating using the U-D factorization. Automatica, 12:375-382, 1976.
[40] N. L. Biggs. Discrete Mathematics. Oxford University Press, 1990.
[41] K. Binder and A. P. Young. Spin glasses: experimental facts, theoretical concepts, and open questions. Reviews of Modern Physics, 58(4):801-976, Oct 1986.
[42] C. M. Bishop. Neural Networks for Pattern Recognition. Oxford University Press, 1995.
[43] C. M. Bishop. Pattern Recognition and Machine Learning. Springer, 2006.
[44] C. M. Bishop and M. Svensén. Bayesian hierarchical mixtures of experts. In U. Kjaerulff and C. Meek, editors, Proceedings Nineteenth Conference on Uncertainty in Artificial Intelligence, pages 57-64. Morgan Kaufmann, 2003.
[45] F. Black and M. Scholes. The pricing of options and corporate liabilities. Journal of Political Economy, 81(3):637-654, 1973.
[46] D. Blei, A. Ng and M. Jordan. Latent Dirichlet allocation. Journal of Machine Learning Research, 3:993-1022, 2003.
[47] R. R. Bouckaert. Bayesian belief networks: from construction to inference. PhD thesis, University of Utrecht, 1995.
[48] S. Boyd and L. Vandenberghe. Convex Optimization. Cambridge University Press, 2004.
[49] Y. Boykov and V. Kolmogorov. An experimental comparison of min-cut/max-flow algorithms for energy minimization in vision. IEEE Transactions on Pattern Analysis Machine Intelligence, 26(9):1124-1137, 2004.
[50] Y. Boykov, O. Veksler and R. Zabih. Fast approximate energy minimization via graph cuts. IEEE Transactions on Pattern Analysis Machine Intelligence, 23:1222-1239, 2001.
[51] C. Bracegirdle and D. Barber. Switch-reset models : Exact and approximate inference. In Proceedings of The Fourteenth International Conference on Artificial Intelligence and Statistics (AISTATS), volume 10, 2011.
[52] M. Brand. Incremental singular value decomposition of uncertain data with missing values. In European Conference on Computer Vision (ECCV), pages 707-720, 2002.
[53] J. Breese and D. Heckerman. Decision-theoretic troubleshooting: a framework for repair and experiment. In E. Horvitz and F. Jensen, editors, Uncertainty in Artificial Intelligence, number 12, pages 124-132. Morgan Kaufmann, 1996.
[54] H. Bunke and T. Caelli. Hidden Markov Models: Applications in Computer Vision. Machine Perception and Artificial Intelligence. World Scientific Publishing Co., Inc., 2001.
[55] W. Buntine. Theory refinement on Bayesian networks. In Uncertainty in Artificial Intelligence, number 7, pages 52-60, 1991. Morgan Kaufmann.
[56] A. Cano and S. Moral. Heuristic algorithms for the triangulation of graphs. In Advances in Intelligent Computing - IPMU 1994, pages 98-107. Number 945 in Lectures Notes in Computer Sciences. SpringerVerlag, 1995.
[57] O. Cappé, E. Moulines and T. Ryden. Inference in Hidden Markov Models. Springer, 2005.
[58] A. T. Cemgil. Bayesian inference in non-negative matrix factorisation models. Technical Report CUED/F-INFENG/TR.609, University of Cambridge, July 2008.
[59] A. T. Cemgil, B. Kappen and D. Barber. A generative model for music transcription. IEEE Transactions on Audio, Speech and Language Processing, 14(2):679-694, 2006.
[60] E. Challis and D. Barber. Local and variational Gaussian approximations for Bayesian generalised linear models. Department of Computer Science, University College London, 2010.
[61] H. S. Chang, M. C. Fu, J. Hu and S. I. Marcus. Simulation-based Algorithms for Markov Decision Processes. Springer, 2007.
[62] S. Chiappa and D. Barber. Bayesian linear Gaussian state space models for biosignal decomposition. Signal Processing Letters, 14(4):267-270, 2007.
[63] S. Chib and M. Dueker. Non-Markovian regime switching with endogenous states and time-varying state strengths. Econometric Society 2004 North American Summer Meetings 600, Econometric Society, August 2004.
[64] C. K. Chow and C. N. Liu. Approximating discrete probability distributions with dependence trees. IEEE Transactions on Information Theory, 14(3):462-467, 1968.
[65] P. S. Churchland and T. J. Sejnowski. The Computational Brain. MIT Press, 1994.
[66] D. Cohn and H. Chang. Learning to probabilistically identify authoritative documents. In P. Langley, editor, International Conference on Machine Learning, number 17, pages 167-174. Morgan Kaufmann, 2000.
[67] D. Cohn and T. Hofmann. The missing link - a probabilistic model of document content and hypertext connectivity. In Neural Information Processing Systems, number 13, pages 430-436. MIT Press, 2001.
[68] A. C. C. Coolen, R. Kühn and P. Sollich. Theory of Neural Information Processing Systems. Oxford University Press, 2005.
[69] G. F. Cooper and E. Herskovits. A Bayesian method for the induction of probabilistic networks from data. Machine Learning, 9(4):309-347, 1992.
[70] A. Corduneanu and C. M. Bishop. Variational Bayesian model selection for mixture distributions. In T. Jaakkola and T. Richardson, editors, Artificial Intelligence and Statistics, pages 27-34. Morgan Kaufmann, 2001.
[71] M. T. Cover and J. A. Thomas. Elements of Information Theory. Wiley, 1991.
[72] R. G. Cowell, A. P. Dawid, S. L. Lauritzen and D. J. Spiegelhalter. Probabilistic Networks and Expert Systems. Springer, 1999.
[73] D. R. Cox and N. Wermuth. Multivariate Dependencies. Chapman and Hall, 1996.
[74] J. C. Cox, S. A. Ross and M. Rubinstein. Option pricing: a simplified approach. Journal of Financial Economics, 7:229-263, 1979.
[75] N. Cristianini and J. Shawe-Taylor. An Introduction to Support Vector Machines. Cambridge University Press, 2000.
[76] P. Dangauthier, R. Herbrich, T. Minka and T. Graepel. Trueskill through time: revisiting the history of chess. In B. Schölkopf, J. Platt and T. Hoffman, editors, Advances in Neural Information Processing Systems (NIPS), number 19, pages 569-576. MIT Press, 2007.
[77] H. A. David. The Method of Paired Comparisons. Oxford University Press, 1988.
[78] A. P. Dawid. Influence diagrams for causal modelling and inference. International Statistical Review, 70:161-189, 2002.
[79] A. P. Dawid and S. L. Lauritzen. Hyper Markov laws in the statistical analysis of decomposable graphical models. Annals of Statistics, 21(3):1272-1317, 1993.
[80] P. Dayan and L. F. Abbott. Theoretical Neuroscience. MIT Press, 2001.
[81] P. Dayan and G. E. Hinton. Using expectation-maximization for reinforcement learning. Neural Computation, 9:271-278, 1997.
[82] T. De Bie, N. Cristianini and R. Rosipal. Eigenproblems in pattern recognition. In Handbook of Geometric Computing: Applications in Pattern Recognition, Computer Vision, Neuralcomputing, and Robotics. Springer-Verlag, 2005.
[83] R. Dechter. Bucket elimination: a unifying framework for probabilistic inference algorithms. In E. Horvitz and F. Jensen, editors, Uncertainty in Artificial Intelligence, pages 211-219. Morgan Kaufmann, 1996.
[84] A. P. Dempster, N. M. Laird, and D. B. Rubin. Maximum Likelihood from Incomplete Data via the EM Algorithm. Journal of the Royal Statistical Society. Series B (Methodological), 39(1):1-38, 1977.
[85] S. Diederich and M. Opper. Learning of correlated patterns in spin-glass networks by local learning rules. Physical Review Letters, 58(9):949-952, 1986.
[86] R. Diestel. Graph Theory. Springer, 2005.
[87] A. Doucet and A. M. Johansen. A tutorial on particle filtering and smoothing: fifteen years later. In D. Crisan and B. Rozovsky, editors, Oxford Handbook of Nonlinear Filtering. Oxford University Press, 2009.
[88] R. O. Duda, P. E. Hart and D. G. Stork. Pattern Classification. Wiley-Interscience Publication, 2000.
[89] J. Durbin. The fitting of time series models. Rev. Inst. Int. Stat., 28:233-243, 1960.
[90] R. Durbin, S. R. Eddy, A. Krogh and G. Mitchison. Biological Sequence Analysis: Probabilistic Models of Proteins and Nucleic Acids. Cambridge University Press, 1999.
[91] A. Düring, A. C. C. Coolen and D. Sherrington. Phase diagram and storage capacity of sequence processing neural networks. Journal of Physics A, 31:8607-8621, 1998.
[92] J. M. Gutierrez, E. Castillo and A. S. Hadi. Expert Systems and Probabilistic Network Models. SpringerVerlag, 1997.
[93] J. Edmonds and R. M. Karp. Theoretical improvements in algorithmic efficiency for network flow problems. Journal of the ACM, 19(2):248-264, 1972.
[94] R. Edwards and A. Sokal. Generalization of the Fortium-Kasteleyn-Swendson-Wang representation and Monte Carlo algorithm. Physical Review D, 38:2009-2012, 1988.
[95] A. E. Elo. The Rating of Chess Players, Past and Present. Arco, second edition, 1986.
[96] R. F. Engel. GARCH 101: The Use of ARCH/GARCH Models in Applied Econometrics. Journal of Economic Perspectives, 15(4):157-168, 2001.
[97] Y. Ephraim and W. J. J. Roberts. Revisiting autoregressive hidden Markov modeling of speech signals. IEEE Signal Processing Letters, 12(2):166-169, 2005.
[98] E. Erosheva, S. Fienberg and J. Lafferty. Mixed membership models of scientific publications. In Proceedings of the National Academy of Sciences, volume 101, pages 5220-5227, 2004.
[99] R-E. Fan, P-H. Chen and C-J. Lin. Working set selection using second order information for training support vector machines. Journal of Machine Learning Research, 6:1889-1918, 2005.
[100] P. Fearnhead. Exact and efficient Bayesian inference for multiple changepoint problems. Technical report, Department of Mathematics and Statistics, Lancaster University, 2003.
[101] G. H. Fischer and I. W. Molenaar. Rasch Models: Foundations, Recent Developments, and Applications. Springer, 1995.
[102] M. E. Fisher. Statistical mechanics of dimers on a plane lattice. Physical Review, 124:1664-1672, 1961.
[103] B. Frey. Extending factor graphs as to unify directed and undirected graphical models. In C. Meek and U. Kjærulff, editors, Uncertainty in Artificial Intelligence, number 19, pages 257-264. Morgan Kaufmann, 2003.
[104] N. Friedman, D. Geiger and M. Goldszmidt. Bayesian network classifiers. Machine Learning, 29:131163, 1997.
[105] S. Frühwirth-Schnatter. Finite Mixture and Markov Switching Models. Springer, 2006.
[106] M. Frydenberg. The chain graph Markov property. Scandinavian Journal of Statistics, 17:333-353, 1990.
[107] T. Furmston and D. Barber. Solving deterministic policy (PO)MPDs using expectation-maximisation and antifreeze. In First International Workshop on Learning and Data Mining for Robotics (LEMIR), September 2009. In conjunction with ECML/PKDD-2009.
[108] T. Furmston and D. Barber. Variational methods for reinforcement learning. In Y. W. Teh and M. Titterington, editors, Proceedings of The Thirteenth International Conference on Artificial Intelligence and Statistics (AISTATS), volume 9, pages 241-248, Chia Laguna, Sardinia, Italy, May 13-15 2010. JMLR.
[109] T. Furmston and D. Barber. Efficient Inference in Markov Control Problems. In Uncertainty in Artificial Intelligence, number 27, Corvallis, Oregon, USA, 2011.
[110] T. Furmston and D. Barber. Lagrange Dual Decomposition for Finite Horizon Markov Decision Processes. In European Conference on Machine Learning (ECML), 2011.
[111] A. Galka, O. Yamashita, T. Ozaki, R. Biscay and P. Valdes-Sosa. A solution to the dynamical inverse problem of EEG generation using spatiotemporal Kalman filtering. NeuroImage, 23:435-453, 2004.
[112] P. Gandhi, F. Bromberg and D. Margaritis. Learning Markov network structure using few independence tests. In Proceedings of the SIAM International Conference on Data Mining, pages 680-691, 2008.
[113] M. R. Garey and D. S. Johnson. Computers and Intractability, A Guide to the Theory of NP-Completeness. W. H. Freeman and Company, 1979.
[114] A. Gelb. Applied Optimal Estimation. MIT Press, 1974.
[115] A. Gelman, G. O. Roberts and W. R. Gilks. Efficient Metropolis jumping rules. In J. O. Bernardo, J. M. Berger, A. P. Dawid and A. F. M. Smith, editors, Bayesian Statistics, volume 5, pages 599-607. Oxford University Press, 1996.
[116] S. Geman and D. Geman. Stochastic relaxation, Gibbs distributions, and the Bayesian restoration of images. In Readings in Uncertain Reasoning, pages 452-472. Morgan Kaufmann, 1990.
[117] M. G. Genton. Classes of kernels for machine learning: a statistics perspective. Journal of Machine Learning Research, 2:299-312, 2001.
[118] W. Gerstner and W. M. Kistler. Spiking Neuron Models. Cambridge University Press, 2002.
[119] Z. Ghahramani and M. J. Beal. Variational inference for Bayesian mixtures of factor analysers. In S. A. Solla, T. K. Leen and K-R. Müller, editors, Advances in Neural Information Processing Systems (NIPS), number 12, pages 449-455. MIT Press, 2000.
[120] Z. Ghahramani and G. E. Hinton. Variational learning for switching state-space models. Neural Computation, 12(4):963-996, 1998.
[121] A. Gibbons. Algorithmic Graph Theory. Cambridge University Press, 1991.
[122] M. Gibbs. Bayesian Gaussian processes for regression and classification. PhD thesis, University of Cambridge, 1997.
[123] W. R. Gilks, S. Richardson and D. J. Spiegelhalter. Markov Chain Monte Carlo in Practice. Chapman and Hall, 1996.
[124] M. Girolami. A variational method for learning sparse and overcomplete representations. Neural Computation, 13:2517-2532, 2001.
[125] M. Girolami and A. Kaban. On an equivalence between PLSI and LDA. In Proceedings of the 26th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval, pages 433-434. ACM Press, 2003.
[126] M. E. Glickman. Parameter estimation in large dynamic paired comparison experiments. Applied Statistics, 48:377-394, 1999.
[127] A. Globerson and T. Jaakkola. Approximate inference using planar graph decomposition. In B. Schölkopf, J. Platt and T. Hoffman, editors, Advances in Neural Information Processing Systems (NIPS), number 19, pages 473-480. MIT Press, 2007.
[128] D. Goldberg, D. Nichols, B. M. Oki and D. Terry. Using collaborative filtering to weave an information tapestry. Communications ACM, 35:61-70, 1992.
[129] G. H. Golub and C. F. van Loan. Matrix Computations. Johns Hopkins University Press, third edition, 1996.
[130] M. C. Golumbic and I. Ben-Arroyo Hartman. Graph Theory, Combinatorics, and Algorithms. SpringerVerlag, 2005.
[131] C. Goutis. A graphical method for solving a decision analysis problem. IEEE Transactions on Systems, Man and Cybernetics, 25:1181-1193, 1995.
[132] P. J. Green and B. W. Silverman. Nonparametric Regression and Generalized Linear Models, volume 58 of Monographs on Statistics and Applied Probability. Chapman and Hall, 1994.
[133] D. M. Greig, B. T. Porteous and A. H. Seheult. Exact maximum a posteriori estimation for binary images. Journal of the Royal Statistical Society, Series B, 2:271-279, 1989.
[134] G. Grimmett and D. Stirzaker. Probability and Random Processes. Oxford University Press, second edition, 1992.
[135] S. F. Gull. Bayesian data analysis: straight-line fitting. In J. Skilling, editor, Maximum Entropy and Bayesian Methods (Cambridge 1988), pages 511-518. Kluwer, 1989.
[136] A. K. Gupta and D. K. Nagar. Matrix Variate Distributions. Chapman and Hall/CRC, 1999.
[137] D. J. Hand and K. Yu. Idiot's Bayes - not so stupid after all? International Statistical Review, 69(3):385398, 2001.
[138] D. R. Hardoon, S. Szedmak and J. Shawe-Taylor. Canonical correlation analysis: an overview with application to learning methods. Neural Computation, 16(12):2639-2664, 2004.
[139] D. O. Hebb. The Organization of Behavior. Wiley, 1949.
[140] D. Heckerman. A tutorial on learning with Bayesian networks. Technical Report MSR-TR-95-06, Microsoft Research, March 1996. Revised November 1996.
[141] D. Heckerman, D. Geiger and D. Chickering. Learning Bayesian networks: the combination of knowledge and statistical data. Machine Learning, 20(3):197-243, 1995.
[142] R. Herbrich, T. Minka and T. Graepel. TrueSkill ${ }^{\text {TM. a Bayesian skill rating system. In B. Schölkopf, }}$ J. Platt and T. Hoffman, editors, Advances in Neural Information Processing Systems (NIPS), number 19, pages 569-576. MIT Press, 2007.
[143] H. Hermansky. Should recognizers have ears? Speech Communication, 25:3-27, 1998.
[144] J. Hertz, A. Krogh and R. Palmer. Introduction to the Theory of Neural Computation. Addison-Wesley, 1991.
[145] T. Heskes. Convexity arguments for efficient minimization of the Bethe and Kikuchi free energies. Journal of Artificial Intelligence Research, 26:153-190, 2006.
[146] D. M. Higdon. Auxiliary variable methods for Markov chain Monte Carlo with applications. Journal of the American Statistical Association, 93(442):585-595, 1998.
[147] G. E. Hinton and R. R. Salakhutdinov. Reducing the dimensionality of data with neural networks. Science, 313:504-507, 2006.
[148] T. Hofmann, J. Puzicha and M. I. Jordan. Learning from dyadic data. In M. S. Kearns, S. A. Solla and D. A. Cohn, editors, Advances in Neural Information Processing Systems (NIPS), pages 466-472. MIT Press, 1999.
[149] R. A. Howard and J. E. Matheson. Influence diagrams. Decision Analysis, 2(3), 2005. Republished version of the original 1981 report.
[150] J. C. Hull. Options, Futures, and Other Derivatives. Prentice Hall, 1997.
[151] A. Hyvärinen, J. Karhunen and E. Oja. Independent Component Analysis. Wiley, 2001.
[152] Aapo Hyvärinen. Consistency of pseudolikelihood estimation of fully visible Boltzmann machines. Neural Computation, 18(10):2283-2292, 2006.
[153] M. Isard and A. Blake. CONDENSATION Conditional density propagation for visual tracking. International Journal of Computer Vision, 29:5-28, 1998.
[154] T. S. Jaakkola and M. I. Jordan. Variational probabilistic inference and the QMR-DT network. Journal of Artificial Intelligence Research, 10:291-322, 1999.
[155] T. S. Jaakkola and M. I. Jordan. Bayesian parameter estimation via variational methods. Statistics and Computing, 10(1):25-37, 2000.
[156] R. A. Jacobs, F. Peng and M. A. Tanner. A Bayesian approach to model selection in hierarchical mixtures-of-experts architectures. Neural Networks, 10(2):231-241, 1997.
[157] R. G. Jarrett. A note on the intervals between coal-mining disasters. Biometrika, 66:191-193, 1979.
[158] E. T. Jaynes. Probability Theory: The Logic of Science. Cambridge University Press, 2003.
[159] F. Jensen, F. V. Jensen and D. Dittmer. From influence diagrams to junction trees. In Proceedings of the 10th Annual Conference on Uncertainty in Artificial Intelligence (UAI-94), pages 367-373. Morgan Kaufmann, 1994.
[160] F. V. Jensen and F. Jensen. Optimal junction trees. In R. Lopez de Mantaras and D. Poole, editors, Uncertainty in Artificial Intelligence, number 10, pages 360-366. Morgan Kaufmann, 1994.
[161] F. V. Jensen and T. D. Nielson. Bayesian Networks and Decision Graphs. Springer-Verlag, second edition, 2007.
[162] M. I. Jordan and R. A. Jacobs. Hierarchical mixtures of experts and the EM algorithm. Neural Computation, 6:181-214, 1994.
[163] B. H. Juang, W. Chou and C. H. Lee. Minimum classification error rate methods for speech recognition. IEEE Transactions on Speech and Audio Processing, 5:257-265, 1997.
[164] L. P. Kaelbling, M. L. Littman and A. R. Cassandra. Planning and acting in partially observable stochastic domains. Artificial Intelligence, 101(1-2):99-134, 1998.
[165] H. J. Kappen. An introduction to stochastic control theory, path integrals and reinforcement learning. In Proceedings 9th Granada Seminar on Computational Physics: Computational and Mathematical Modeling of Cooperative Behavior in Neural Systems, volume 887, pages 149-181. American Institute of Physics, 2007.
[166] H. J. Kappen and F. B. Rodríguez. Efficient learning in Boltzmann machines using linear response theory. Neural Compution, 10(5):1137-1156, 1998.
[167] H. J. Kappen and W. Wiegerinck. Novel iteration schemes for the Cluster Variation Method. In T. G. Dietterich, S. Becker and Z. Ghahramani, editors, Advances in Neural Information Processing Systems (NIPS), number 14, pages 415-422. MIT Press, 2002.
[168] Y. Karklin and M. S. Lewicki. Emergence of complex cell properties by learning to generalize in natural scenes. Nature, 457:83-86, November 2008.
[169] G. Karypis and V. Kumar. A fast and high quality multilevel scheme for partitioning irregular graphs. SIAM Journal on Scientific Computing, 20(1):359-392, 1998.
[170] P. W. Kasteleyn. Dimer statistics and phase transitions. Journal of Mathematical Physics, 4(2):287-293, 1963.
[171] S. A. Kauffman. At Home in the Universe: The Search for Laws of Self-Organization and Complexity. Oxford University Press, 1995.
[172] C-J. Kim. Dynamic linear models with Markov-switching. Journal of Econometrics, 60:1-22, 1994.
[173] C-J. Kim and C. R. Nelson. State-Space Models with Regime Switching. MIT Press, 1999.
[174] G. Kitagawa. The two-filter formula for smoothing and an implementation of the Gaussian-sum smoother. Annals of the Institute of Statistical Mathematics, 46(4):605-623, 1994.
[175] U. B. Kjaerulff and A. L. Madsen. Bayesian Networks and Influence Diagrams: A Guide to Construction and Analysis. Springer, 2008.
[176] N. Komodakis, N. Paragios, and G. Tziritas. MRF Optimization via Dual Decomposition: MessagePassing Revisited. In IEEE 11th International Conference on Computer Vision, ICCV, pages 1-8, 2007.
[177] A. Krogh, M. Brown, I. Mian, K. Sjolander and D. Haussler. Hidden Markov models in computational biology: Applications to protein modeling. Journal of Molecular Biology, 235:1501-1531, 1994.
[178] S. Kullback. Information Theory and Statistics. Dover, 1968.
[179] K. Kurihara, M. Welling and Y. W. Teh. Collapsed variational Dirichlet process mixture models. In Proceedings of the International Joint Conference on Artificial Intelligence, volume 20, pages 27962801, 2007.
[180] J. Lafferty, A. McCallum and F. Pereira. Conditional random fields: probabilistic models for segmenting and labeling sequence data. In C. E. Brodley and A. P. Danyluk, editors, International Conference on Machine Learning, number 18, pages 282-289. Morgan Kaufmann, 2001.
[181] H. Lass. Elements of Pure and Applied Mathematics. McGraw-Hill (reprinted by Dover), 1957.
[182] S. L. Lauritzen. Graphical Models. Oxford University Press, 1996.
[183] S. L. Lauritzen, A. P. Dawid, B. N. Larsen and H-G. Leimer. Independence properties of directed Markov fields. Networks, 20:491-505, 1990.
[184] S. L. Lauritzen and D. J. Spiegelhalter. Local computations with probabilities on graphical structures and their application to expert systems. Journal of Royal Statistical Society B, 50(2):157-224, 1988.
[185] D. D. Lee and H. S. Seung. Algorithms for non-negative matrix factorization. In T. K. Leen, T. G. Dietterich and V. Tresp, editors, Advances in Neural Information Processing Systems (NIPS), number 13, pages 556-562, 2001. MIT Press.
[186] M. A. R. Leisink and H. J. Kappen. A tighter bound for graphical models. In Neural Computation, volume 13, pages 2149-2171. MIT Press, 2001.
[187] V. Lepar and P. P. Shenoy. A comparison of Lauritzen-Spiegelhalter, Hugin, and Shenoy-Shafer architectures for computing marginals of probability distributions. In G. Cooper and S. Moral, editors, Uncertainty in Artificial Intelligence, number 14, pages 328-333. Morgan Kaufmann, 1998.
[188] U. Lerner, R. Parr, D. Koller and G. Biswas. Bayesian fault detection and diagnosis in dynamic systems. In Proceedings of the Seventeenth National Conference on Artificial Intelligence (AIII-00), pages 531537, 2000.
[189] U. N. Lerner. Hybrid Bayesian Networks for Reasoning about Complex Systems. Computer Science Department, Stanford University, 2002.
[190] R. Linsker. Improved local learning rule for information maximization and related applications. Neural Networks, 18(3):261-265, 2005.
[191] Y. L. Loh, E. W. Carlson and M. Y. J. Tan. Bond-propagation algorithm for thermodynamic functions in general two-dimensional Ising models. Physical Review B, 76(1):014404, 2007.
[192] H. Lopes and M. West. Bayesian model assessment in factor analysis. Statistica Sinica, 14:41-67, 2003.
[193] T. J. Loredo. From Laplace to supernova SN 1987A: Bayesian inference in astrophysics. In P. F. Fougere, editor, Maximum Entropy and Bayesian Methods, pages 81-142. Kluwer, 1990.
[194] D. J. C. MacKay. Bayesian interpolation. Neural Computation, 4(3):415-447, 1992.
[195] D. J. C. MacKay. Probable networks and plausible predictions - a review of practical Bayesian methods for supervised neural networks. Network: Computation in Neural Systems, 6(3):469-505, 1995.
[196] D. J. C. MacKay. Introduction to Gaussian processes. In Neural Networks and Machine Learning, volume 168 of NATO Advanced Study Institute on Generalization in Neural Networks and Machine Learning, pages 133-165. Springer, 1998.
[197] D. J. C. MacKay. Information Theory, Inference and Learning Algorithms. Cambridge University Press, 2003.
[198] U. Madhow. Fundamentals of Digital Communication. Cambridge University Press, 2008.
[199] K. V. Mardia, J. T. Kent and J. M. Bibby. Multivariate Analysis. Academic Press, 1997.
[200] H. Markram, J. Lubke, M. Frotscher and B. Sakmann. Regulation of synaptic efficacy by coincidence of postsynaptic APs and EPSPs. Science, 275:213-215, 1997.
[201] A. McCallum, K. Nigam, J. Rennie, and K. Seymore. Automating the construction of internet portals with machine learning. Information Retrieval Journal, 3:127-163, 2000.
[202] G. McLachlan and T. Krishnan. The EM Algorithm and Extensions. John Wiley and Sons, 1997.
[203] G. McLachlan and D. Peel. Finite Mixture Models. Wiley Series in Probability and Statistics. WileyInterscience, 2000.
[204] E. Meeds, Z. Ghahramani, R. M. Neal and S. T. Roweis. Modeling dyadic data with binary latent factors. In B. Schölkopf, J. Platt and T. Hoffman, editors, Advances in Neural Information Processing Systems (NIPS), volume 19, pages 977-984. MIT Press, 2007.
[205] M. Meila. An accelerated Chow and Liu algorithm: fitting tree distributions to high-dimensional sparse data. In I. Bratko, editor, International Conference on Machine Learning, pages 249-257. Morgan Kaufmann, 1999.
[206] M. Meila and M. I. Jordan. Triangulation by continuous embedding. In M. C. Mozer, M. I. Jordan and T. Petsche, editors, Advances in Neural Information Processing Systems (NIPS), number 9, pages 557-563. MIT Press, 1997.
[207] B. Mesot and D. Barber. Switching linear dynamical systems for noise robust speech recognition. IEEE Transactions of Audio, Speech and Language Processing, 15(6):1850-1858, 2007.
[208] N. Meuleau, M. Hauskrecht, K-E. Kim et al. Solving very large weakly coupled Markov decision processes. In Proceedings of the Fifteenth National Conference on Artificial Intelligence, pages 165172, 1998.
[209] T. Mills. The Econometric Modelling of Financial Time Series. Cambridge University Press, 2000.
[210] T. Minka. Expectation propagation for approximate Bayesian inference. In J. Breese and D. Koller, editors, Uncertainty in Artificial Intelligence, number 17, pages 362-369. Morgan Kaufmann, 2001.
[211] T. Minka. A comparison of numerical optimizers for logistic regression. Technical report, Microsoft Research Ltd., 2003. research.microsoft.com/~minka/papers/logreg.
[212] T. Minka. Divergence measures and message passing. Technical Report MSR-TR-2005-173, Microsoft Research Ltd. December 2005.
[213] A. Mira, J. Møller and G. O. Roberts. Perfect slice samplers. Journal of the Royal Statistical Society, 63(3):593-606, 2001. Series B (Statistical Methodology).
[214] C. Mitchell, M. Harper and L. Jamieson. On the complexity of explicit duration HMM's. IEEE Transactions on Speech and Audio Processing, 3(3):213-217, 1995.
[215] T. Mitchell. Machine Learning. McGraw-Hill, 1997.
[216] J. Mooij and H. J. Kappen. Sufficient conditions for convergence of loopy belief propagation. IEEE Information Theory, 53:4422-4437, 2007.
[217] J. W. Moon and L. Moser. On cliques in graphs. Israel Journal of Mathematics, (3):23-28, 1965.
[218] A. Moore. A tutorial on kd-trees. Technical report, 1991. Available from www.cs.cmu.edu/~awm/ papers.html.
[219] J. Moussouris. Gibbs and Markov random systems with constraints. Journal of Statistical Physics, 10:11-33, 1974.
[220] R. M. Neal. Probabilistic inference using Markov chain Monte Carlo methods. CRG-TR-93-1, Dept. of Computer Science, University of Toronto, 1993.
[221] R. M. Neal. Markov chain sampling methods for Dirichlet process mixture models. Journal of Computational and Graphical Statistics, 9(2):249-265, 2000.
[222] R. M. Neal. Slice sampling. Annals of Statistics, 31:705-767, 2003.
[223] R. E. Neapolitan. Learning Bayesian Networks. Prentice Hall, 2003.
[224] A. V. Nefian, L. Luhong, P. Xiaobo, X. Liu, C. Mao and K. Murphy. A coupled HMM for audio-visual speech recognition. In IEEE International Conference on Acoustics, Speech, and Signal Processing, volume 2, pages 2013-2016, 2002.
[225] H. Nickisch and M. Seeger. Convex variational Bayesian inference for large scale generalized linear models. International Conference on Machine Learning, 26:761-768, 2009.
[226] D. Nilsson. An efficient algorithm for finding the $m$ most probable configurations in a probabilistic expert system. Statistics and Computing, 8:159-173, 1998.
[227] D. Nilsson and J. Goldberger. Sequentially finding the $N$-best list in hidden Markov models. International Joint Conference on Artificial Intelligence (IJCAI), 17, 2001.
[228] A. B. Novikoff. On convergence proofs on perceptrons. In Symposium on the Mathematical Theory of Automata (New York, 1962), volume 12, pages 615-622. Polytechnic Press of Polytechnic Institute of Brooklyn, 1963.
[229] F. J. Och and H. Ney. Discriminative training and maximum entropy models for statistical machine translation. In Proceedings of the Annual Meeting of the Association for Computational Linguistics, pages 295-302, Philadelphia, July 2002.
[230] B. A. Olshausen and D. J. Field. Sparse coding with an overcomplete basis set: a strategy employed by V1? Vision Research, 37:3311-3325, 1998.
[231] A. V. Oppenheim, R. W. Shafer, M. T. Yoder and W. T. Padgett. Discrete-Time Signal Processing. Prentice Hall, third edition, 2009.
[232] M. Ostendorf, V. Digalakis and O. A. Kimball. From HMMs to segment models: a unified view of stochastic modeling for speech recognition. IEEE Transactions on Speech and Audio Processing, 4:360-378, 1995.
[233] P. Paatero and U. Tapper. Positive matrix factorization: a non-negative factor model with optimal utilization of error estimates of data values. Environmetrics, 5:111-126, 1994.
[234] A. Palmer, D. Wipf, K. Kreutz-Delgado and B. Rao. Variational EM algorithms for non-Gaussian latent variable models. In B. Schölkopf, J. Platt and T. Hoffman, editors, Advances in Neural Information Processing Systems (NIPS), number 19, pages 1059-1066. MIT Press, 2006.
[235] V. Pavlovic, J. M. Rehg and J. MacCormick. Learning switching linear models of human motion. In T. K. Leen, T. G. Dietterich and V. Tresp, editors, Advances in Neural Information Processing Systems (NIPS), number 13, pages 981-987. MIT Press, 2001.
[236] J. Pearl. Probabilistic Reasoning in Intelligent Systems: Networks of Plausible Inference. Morgan Kaufmann, 1988.
[237] J. Pearl. Causality: Models, Reasoning and Inference. Cambridge University Press, 2000.
[238] B. A. Pearlmutter and L. C. Parra. Maximum likelihood blind source separation: a context-sensitive generalization of ICA. In M. C. Mozer, M. I. Jordan and T. Petsche, editors, Advances in Neural Information Processing Systems (NIPS), number 9, pages 613-619. MIT Press, 1997.
[239] K. B. Petersen and O. Winther. The EM algorithm in independent component analysis. In IEEE International Conference on Acoustics, Speech, and Signal Processing, volume 5, pages 169-172, 2005.
[240] J-P. Pfister, T. Toyiozumi, D. Barber and W. Gerstner. Optimal spike-timing dependent plasticity for precise action potential firing in supervised learning. Neural Computation, 18:1309-1339, 2006.
[241] J. Platt. Fast training of support vector machines using sequential minimal optimization. In B. Schölkopf, C. J. C. Burges and A. J. Smola, editors, Advances in Kernel Methods - Support Vector Learning, pages 185-208. MIT Press, 1999.
[242] I. Porteous, D. Newman, A. Ihler, et al. Fast collapsed Gibbs sampling for latent Dirichlet allocation. In KDD '08: Proceeding of the 14th ACM SIGKDD International Conference on Knowledge Discovery and Data Mining, pages 569-577. ACM, 2008.
[243] J. E. Potter and R. G. Stern. Statistical filtering of space navigation measurements. In American Institute of Aeronautics and Astronautics Guidance and Control Conference, volume 13, pages 775-801, August 1963.
[244] W. Press, W. Vettering, S. Teukolsky and B. Flannery. Numerical Recipes in Fortran. Cambridge University Press, 1992.
[245] S. J. D. Prince and J. H. Elder. Probabilistic linear discriminant analysis for inferences about identity. In IEEE 11th International Conference on Computer Vision ICCV, pages 1-8, 2007.
[246] L. R. Rabiner. A tutorial on hidden Markov models and selected applications in speech recognition. Proceedings of the IEEE, 77(2):257-286, 1989.
[247] C. E. Rasmussen and C. K. I. Williams. Gaussian Processes for Machine Learning. MIT Press, 2006.
[248] H. E. Rauch, G. Tung and C. T. Striebel. Maximum likelihood estimates of linear dynamic systems. American Institute of Aeronautics and Astronautics Journal (AIAAJ), 3(8):1445-1450, 1965.
[249] T. Richardson and P. Spirtes. Ancestral graph Markov models. Annals of Statistics, 30(4):962-1030, 2002.
[250] D. Rose, R. E. Tarjan and E. S. Lueker. Algorithmic aspects of vertex elimination of graphs. SIAM Journal on Computing, 5:266-283, 1976.
[251] F. Rosenblatt. The perceptron: a probabilistic model for information storage and organization in the brain. Psychological Review, 65(6):386-408, 1958.
[252] S. T. Roweis and L. J. Saul. Nonlinear dimensionality reduction by locally linear embedding. Science, 290(5500):2323-2326, 2000.
[253] D. B. Rubin. Using the SIR algorithm to simulate posterior distributions. In M. H. Bernardo, K. M. Degroot, D. V. Lindley and A. F. M. Smith, editors, Bayesian Statistics 3. Oxford University Press, 1988.
[254] D. Saad and M. Opper. Advanced Mean Field Methods Theory and Practice. MIT Press, 2001.
[255] R. Salakhutdinov, S. Roweis and Z. Ghahramani. Optimization with EM and expectation-conjugategradient. In T. Fawcett and N. Mishra, editors, International Conference on Machine Learning, number 20, pages 672-679. AAAI Press, 2003.
[256] L. K. Saul and M. I. Jordan. Exploiting tractable substructures in intractable networks. In D. S. Touretzky, M. Mozer and M. E. Hasselmo, editors, Advances in Neural Information Processing Systems (NIPS), number 8, pages 486-492. MIT Press, 1996.
[257] L. Savage. The Foundations of Statistics. Wiley, 1954.
[258] R. D. Schachter. Bayes-ball: the rational pastime (for determining irrelevance and requisite information in belief networks and influence diagrams). In G. Cooper and S. Moral, editors, Uncertainty in Artificial Intelligence, number 14, pages 480-487. Morgan Kaufmann, 1998.
[259] B. Schölkopf, A. Smola and K. R. Müller. Nonlinear component analysis as a kernel eigenvalue problem. Neural Computation, 10:1299-1319, 1998.
[260] N. N. Schraudolph and D. Kamenetsky. Efficient exact inference in planar Ising models. In D. Koller, D. Schuurmans, Y. Bengio and L. Bottou, editors, Advances in Neural Information Processing Systems (NIPS), number 21, pages 1417-1424. MIT Press, 2009.
[261] E. Schwarz. Estimating the dimension of a model. Annals of Statistics, 6(2):461-464, 1978.
[262] M. Seeger. Gaussian processes for machine learning. International Journal of Neural Systems, 14(2):69106, 2004.
[263] M. Seeger. Expectation propagation for exponential families. Technical report, Department of EECS, Berkeley, 2005. www.kyb.tuebingen.mpg.de/bs/people/seeger.
[264] J. Shawe-Taylor and N. Cristianini. Kernel Methods for Pattern Analysis. Cambridge University Press, 2004.
[265] S. Siddiqi, B. Boots and G. Gordon. A constraint generation approach to learning stable linear dynamical systems. In J. C. Platt, D. Koller, Y. Singer and S. Roweis, editors, Advances in Neural Information Processing Systems (NIPS), number 20, pages 1329-1336. MIT Press, 2008.
[266] T. Silander, P. Kontkanen and P. Myllymäki. On sensitivity of the MAP Bayesian network structure to the equivalent sample size parameter. In R. Parr and L. van der Gaag, editors, Uncertainty in Artificial Intelligence, number 23, pages 360-367. AUAI Press, 2007.
[267] S. S. Skiena. The Algorithm Design Manual. Springer-Verlag, 1998.
[268] E. Smith and M. S. Lewicki. Efficient auditory coding. Nature, 439(7079):978-982, 2006.
[269] P. Smolensky. Parallel Distributed Processing: Volume 1: Foundations, chapter Information processing in dynamical systems: foundations of harmony theory, pages 194-281. MIT Press, 1986.
[270] G. Sneddon. A statistical perspective on data assimilation in numerical Models. In Studies in the Atmospheric Sciences, number 144 in Lecture Notes in Statistics. Springer-Verlag, 2000.
[271] P. Sollich. Bayesian methods for support vector machines: evidence and predictive class probabilities. Machine Learning, 46(1-3):21-52, 2002.
[272] D. X. Song, D. Wagner and X. Tian. Timing analysis of keystrokes and timing attacks on SSH. In Proceedings of the 10th Conference on USENIX Security Symposium. USENIX Association, 2001.
[273] A. S. Spanias. Speech coding: a tutorial review. Proceedings of the IEEE, 82(10):1541-1582, Oct 1994.
[274] P. Spirtes, C. Glymour and R. Scheines. Causation, Prediction, and Search. MIT Press, second edition, 2000.
[275] N. Srebro. Maximum likelihood bounded tree-width Markov networks. In J. Breese and D. Koller, editors, Uncertainty in Artificial Intelligence, number 17, pages 504-511. Morgan Kaufmann, 2001.
[276] H. Steck. Constraint-based structural learning in Bayesian networks using finite data sets. PhD thesis, Technical University Munich, 2001.
[277] H. Steck. Learning the Bayesian network structure: Dirichlet prior vs data. In D. A. McAllester and P. Myllymaki, editors, Uncertainty in Artificial Intelligence, number 24, pages 511-518. AUAI Press, 2008.
[278] H. Steck and T. Jaakkola. On the Dirichlet prior and Bayesian regularization. In S. Becker, S. Thrun and K. Obermayer, editors, NIPS, pages 697-704. MIT Press, 2002.
[279] G. Strang. Linear Algebra and Its Applications. Brooks Cole, 1988.
[280] M. Studený. On mathematical description of probabilistic conditional independence structures. PhD thesis, Academy of Sciences of the Czech Republic, 2001.
[281] M. Studený. On non-graphical description of models of conditional independence structure. In HSSS Workshop on Stochastic Systems for Individual Behaviours. Louvain la Neueve, Belgium, 22-23 January 2001.
[282] C. Sutton and A. McCallum. An introduction to conditional random fields for relational learning. In L. Getoor and B. Taskar, editors, Introduction to Statistical Relational Learning. MIT Press, 2006.
[283] R. S. Sutton and A. G. Barto. Reinforcement Learning: An Introduction. MIT Press, 1998.
[284] R. J. Swendsen and J-S. Wang. Nonuniversal critical dynamics in Monte Carlo simulations. Physical Review Letters, 58:86-88, 1987.
[285] B. K. Sy. A recurrence local computation approach towards ordering composite beliefs in Bayesian belief networks. International Journal of Approximate Reasoning, 8:17-50, 1993.
[286] T. Sejnowski. The Book of Hebb. Neuron, 24:773-776, 1999.
[287] R. E. Tarjan and M. Yannakakis. Simple linear-time algorithms to test chordality of graphs, test acyclicity of hypergraphs, and selectively reduce acyclic hypergraphs. SIAM Journal on Computing, 13(3):566579, 1984.
[288] S. J. Taylor. Modelling Financial Time Series. World Scientific, second edition, 2008.
[289] Y. W. Teh, D. Newman and M. Welling. A collapsed variational Bayesian inference algorithm for latent Dirichlet allocation. In J. C. Platt, D. Koller, Y. Singer and S. Roweis, editors, Advances in Neural Information Processing Systems (NIPS), number 20, pages 1481-1488. MIT Press, 2008.
[290] Y. W. Teh and M. Welling. The unified propagation and scaling algorithm. In T. G. Dietterich, S. Becker and Z. Ghahramani, editors, Advances in Neural Information Processing Systems (NIPS), number 14, pages 953-960. MIT Press, 2002.
[291] R. Tibshirani. Regression shrinkage and selection via the lasso. Journal of the Royal Statistical Society (B), 58:267-288, 1996.
[292] H. Tijms. Understanding Probability. Cambridge University Press, 2003.
[293] M. Tipping and C. M. Bishop. Mixtures of probabilistic principal component analysers. Neural Computation, 11(2):443-482, 1999.
[294] M. E. Tipping. Sparse Bayesian Learning and the Relevance Vector Machine. Journal of Machine Learning Research, (1):211-244, 2001.
[295] M. E. Tipping. Sparse Bayesian learning and the relevance vector machine. Journal of Machine Learning Research, 1:211-244, 2001.
[296] M. E. Tipping and C. M. Bishop. Probabilistic principal component analysis. Journal of the Royal Statistical Society, Series B, 61(3):611-622, 1999.
[297] D. M. Titterington, A. F. M. Smith and U. E. Makov. Statistical Analysis of Finite Mixture Distributions. Wiley, 1985.
[298] M. Toussaint, S. Harmeling and A. Storkey. Probabilistic inference for solving (PO)MDPs. Research Report EDI-INF-RR-0934, University of Edinburgh, School of Informatics, 2006.
[299] M. Tsodyks, K. Pawelzik and H. Markram. Neural networks with dynamic synapses. Neural Computation, 10:821-835, 1998.
[300] L. van der Matten and G. Hinton. Visualizing data using t-SNE. Journal of Machine Learning Research, 9:2579-2605, 2008.
[301] P. Van Overschee and B. De Moor. Subspace Identification for Linear Systems; Theory, Implementations, Applications. Kluwer, 1996.
[302] V. Vapnik. The Nature of Statistical Learning Theory. Springer, 1995.
[303] M. Verhaegen and P. Van Dooren. Numerical aspects of different Kalman filter implementations. IEEE Transactions of Automatic Control, 31(10):907-917, 1986.
[304] T. Verma and J. Pearl. Causal networks: semantics and expressiveness. In R. D. Schacter, T. S. Levitt, L. N. Kanal and J.F. Lemmer, editors, Uncertainty in Artificial Intelligence, volume 4, pages 69-76. North-Holland, 1990.
[305] T. O. Virtanen, A. T. Cemgil and S. J. Godsill. Bayesian extensions to nonnegative matrix factorisation for audio signal modelling. In IEEE International Conference on Acoustics, Speech, and Signal Processing, pages 1825-1828, 2008.
[306] G. Wahba. Support Vector Machines, Repreducing Kernel Hilbert Spaces, and Randomized GACV, pages 69-88. MIT Press, 1999.
[307] M. J. Wainwright and M. I. Jordan. Graphical models, exponential families, and variational inference. Foundations and Trends in Machine Learning, 1(1-2):1-305, 2008.
[308] H. Wallach. Efficient training of conditional random fields. Master's thesis, Division of Informatics, University of Edinburgh, 2002.
[309] Y. Wang, J. Hodges and B. Tang. Classification of web documents using a naive Bayes method. 15th IEEE International Conference on Tools with Artificial Intelligence, pages 560-564, 2003.
[310] S. Waterhouse, D. Mackay and T. Robinson. Bayesian methods for mixtures of experts. In D. S. Touretzky, M. Mozer and M. E. Hasselmo, editors, Advances in Neural Information Processing Systems (NIPS), number 8, pages 351-357. MIT Press, 1996.
[311] C. Watkins and P. Dayan. Q-learning. Machine Learning, 8:279-292, 1992.
[312] Y. Weiss and W. T. Freeman. Correctness of belief propagation in Gaussian graphical models of arbitrary topology. Neural Computation, 13(10):2173-2200, 2001.
[313] M. Welling, T. P. Minka and Y. W. Teh. Structured region graphs: morphing EP into GBP. In F. Bacchus and T. Jaakkola, editors, Uncertainty in Artificial Intelligence, number 21, pages 609-614. AUAI press, 2005.
[314] J. Whittaker. Graphical Models in Applied Multivariate Statistics. John Wiley \& Sons, 1990.
[315] W. Wiegerinck. Variational approximations between mean field theory and the junction tree algorithm. In C. Boutilier and M. Goldszmidt, editors, Uncertainty in Artificial Intelligence, number 16, pages 626-633. Morgan Kaufmann, 2000.
[316] W. Wiegerinck and T. Heskes. Fractional belief propagation. In S. Becker, S. Thrun and K. Obermayer, editors, Advances in Neural Information Processing Systems (NIPS), number 15, pages 438-445. MIT Press, 2003.
[317] C. K. I. Williams. Computing with infinite networks. In M. C. Mozer, M. I. Jordan and T. Petsche, editors, Advances in Neural Information Processing Systems (NIPS), number 9, pages 295-301. MIT Press, 1997.
[318] C. K. I. Williams and D. Barber. Bayesian classification with Gaussian processes. IEEE Transactions on Pattern Analysis and Machine Intelligence, 20:1342-1351, 1998.
[319] C. Yanover and Y. Weiss. Finding the $M$ most probable configurations using loopy belief propagation. In S. Thrun, L. Saul and B. Schölkopf, editors, Advances in Neural Information Processing Systems (NIPS), number 16, pages 1457-1464. MIT Press, 2004.
[320] J. S. Yedidia, W. T. Freeman, and Y. Weiss. Constructing free-energy approximations and generalized belief propagation algorithms. IEEE Transactions on Information Theory, 51(7):2282-2312, July 2005.
[321] S. Young, D. Kershaw, J. Odell, et al. The HTK Book Version 3.0. Entropic Cambridge Research Laboratory, 2000.
[322] A. L. Yuille and A. Rangarajan. The concave-convex procedure. Neural Computation, 15(4):915-936, 2003.
[323] J.-H. Zhao, P. L. H. Yu and Q. Jiang. ML estimation for factor analysis: EM or non-EM? Statistics and Computing, 18(2):109-123, 2008.
[324] O. Zoeter. Monitoring non-linear and switching dynamical systems. PhD thesis, Radboud University Nijmegen, 2005.

