

Bibliografía

- [Allwein et al., 2000] Allwein, E. L., Schapire, R. E., and Singer, Y. (2000). Reducing multiclass to binary: A unifying approach for margin classifiers. *Proceedings of the International Conference on Machine Learning ICML'00*.
- [Alpaydin and Mayoraz, 1998] Alpaydin, E. and Mayoraz, E. (1998). Combining linear dichotomizers to construct nonlinear polychotomizers. Technical Report IDIAP-RR 5, IDIAP, Switzerland.
- [Angulo and Català, 1998] Angulo, C. and Català, A. (1998). A tikhonov approach to calculate regularisation matrices. In Verleysen, M., editor, *Proceedings of the 6th European Symposium on Artificial Neural Networks ESANN'98*, pages 27–32, Bruges, Belgium. D-Facto.
- [Angulo and Català, 1999] Angulo, C. and Català, A. (1999). Xarxes neuronals regularitzades i màquines de suport vectorial. In *Butlletí ACIA 2n Congrés Català d'Intel.ligència Artificial*, pages 56–59, Girona, Spain.
- [Angulo and Català, 2000a] Angulo, C. and Català, A. (2000a). K-svcr. a multi-class support vector machine. In de Mántaras, R. L. and Plaza, E., editors, *Proceedings of the European Conference on Machine Learning ECML'00*, volume 1810 of *Lecture Notes in Artificial Intelligence*, pages 31–38, Barcelona, Spain. Springer.
- [Angulo and Català, 2000b] Angulo, C. and Català, A. (2000b). K-svcr regressió ordinal per a un problema financer. In *Butlletí ACIA 3r Congrés Català d'Intel.ligència Artificial*, pages 90–94, Vilanova i la Geltrú, Spain.
- [Bakiri and Dietterich, 2000] Bakiri, G. and Dietterich, T. G. (2000). Achieving high-accuracy text-to-speech with machine learning. In Damper, B., editor, *Data Mining in Speech Synthesis*, page To be published. Chapman and Hall.
- [Bartlett, 1998] Bartlett, P. (1998). The sample complexity of pattern classification with neural networks: the size of the weights is more important than the size of the network. *IEEE Transactions on Information Theory*, 44:525–536.
- [Bennett, 1999] Bennett, K. (1999). Combining support vector and mathematical programming methods for classification. In Schölkopf, B., Burges, C., and Smola,

- A., editors, *Advances in Kernel Methods: Support Vector Learning*. MIT Press, Cambridge, MA.
- [Bennett and Mangasarian, 1994] Bennett, K. and Mangasarian, O. (1994). Serial and parallel multiclass discrimination. *SIAM Journal on Optimization*, 4:722–734.
- [Bertero et al., 1988] Bertero, M., Poggio, T., and Torre, V. (1988). Ill-posed problems in early vision. *Proceedings of the IEEE*, 76:869–889.
- [Bishop, 1995] Bishop, C. (1995). *Neural Networks for Pattern Recognition*. Oxford University Press.
- [Blake and Merz, 1998] Blake, C. and Merz, C. (1998). UCI repository of machine learning databases.
- [Bossley, 1993] Bossley, K. (1993). Regularisation theory applied to neurofuzzy modelling. Technical Report ISIS-TR3, University of Southampton, UK.
- [Bredensteiner and Bennett, 1999] Bredensteiner, E. and Bennett, K. (1999). Multicategory classification by support vector machines. *Computational Optimizations and Applications*, 12:53–79.
- [Broomhead and Lowe, 1988] Broomhead, D. and Lowe, D. (1988). Multivariable functional interpolation and adaptive networks. *Complex Systems*, 2:321–355.
- [Burges, 1998] Burges, C. (1998). A tutorial on support vector machines for pattern recognition. *Data Mining And Knowledge Discovery*, 2:1–47.
- [Campbell, 2000] Campbell, C. (2000). An introduction to kernel methods. In Howlett, R. and Jain, L., editors, *Radial Basis Function Networks: Design and Applications*, Berlin, Germany. Springer Verlag.
- [Català and Angulo, 2000] Català, A. and Angulo, C. (2000). A comparison between the tikhonov and the bayesian approaches to calculate regularisation matrices. *Neural Processing Letters*, 11(3):185–195.
- [Cherkassky and Mulier, 1998] Cherkassky, V. and Mulier, F. (1998). *Learning from data: concepts, theory, and methods*. John Wiley and Sons, New York.
- [Cortes and Vapnik, 1995] Cortes, C. and Vapnik, V. (1995). Support vector networks. *Machine Learning*, 20:273–297.
- [Dietterich and Bakiri, 1995] Dietterich, T. G. and Bakiri, G. (1995). Solving multiclass learning problems via error-correcting output codes. *Journal of Artificial Intelligence Research*, 2:263–286.
- [Evgeniou et al., 1999] Evgeniou, T., Pontil, M., and Poggio, T. (1999). A unified framework for regularization networks and support vector machines. In Smola, A., Bartlett, P., Schölkopf, B., and Schuurmans, D., editors, *Advances in Large Margin Classifiers*. MIT Press, Cambridge, MA.

- [Fan and Palaniswami, 2000] Fan, A. and Palaniswami, M. (2000). Selecting bankruptcy predictors using a support vector machine approach. In *Proceedings of the International Joint Conference on Neural Networks (IJCNN'00)*, Como, Italy.
- [Friedman, 1996] Friedman, J. (1996). Another approach to polychotomous classification. Technical report, Department of Statistics, Stanford University.
- [Girosi, 1998] Girosi, F. (1998). An equivalence between sparse approximation and support vector machines. *Neural Computation*, 10:1455–1480.
- [Girosi et al., 1993] Girosi, F., Jones, M., and Poggio, T. (1993). Priors, stabilizers and basis functions: from regularization to radial, tensor and additive splines. Technical Report AI Memo 1430, CBCL, MIT.
- [Guermeur et al., 1999] Guermeur, Y., Elisseeff, A., and Paugam-Moisy, H. (1999). Estimating the sample complexity of a multiclass discriminant model. In *Proceedings of the 9th International Conference on Artificial Neural Networks ICANN'99*, pages 310–315, Edinburgh, UK.
- [Guermeur et al., 2000] Guermeur, Y., Elisseeff, A., and Paugam-Moisy, H. (2000). A new multi-class svm based on a uniform convergence result. In *Proceedings of the International Joint Conference on Neural Networks (IJCNN'00)*, Como, Italy.
- [Hastie and Tibshirani, 1998] Hastie, T. and Tibshirani, R. (1998). Classification by pairwise coupling. In Jordan, M. I., Kearns, M. J., and Solla, S. A., editors, *Advances in Neural Information Processing Systems*, volume 10, Cambridge, MA. MIT Press.
- [Herbrich et al., 1999a] Herbrich, R., Graepel, T., and Campbell, C. (1999a). Bayesian learning in reproducing kernel hilbert spaces. Technical Report 99-1, Technical University of Berlin, Germany.
- [Herbrich et al., 1999b] Herbrich, R., Graepel, T., and Obermayer, K. (1999b). Support vector learning for ordinal regression. In *Proceedings of the 9th International Conference on Artificial Neural Networks ICANN'99*, pages 97–102, Edinburgh, UK.
- [Herbrich et al., 2000] Herbrich, R., Graepel, T., and Obermayer, K. (2000). Large margin rank boundaries for ordinal regression. In Smola, A., Bartlett, P., Schölkopf, B., and Schuurmans, D., editors, *Advances in Large Margin Classifiers*, pages 281–296. MIT Press, Cambridge, MA.
- [Hornik et al., 1989] Hornik, K., Stinchcombe, M., and White, H. (1989). Multilayer feedforward networks are universal approximators. *Neural Networks*, 2:359–366.
- [Johansen, 1996] Johansen, T. A. (1996). Identification of non-linear systems using empirical data and prior knowledge – an optimization approach. *Automatica*, 32:337–356.

- [Johansen, 1997] Johansen, T. A. (1997). On tikhonov regularization, bias and variance in nonlinear system identification. *Automatica*, 33:441–446.
- [Keerthi et al., 1999] Keerthi, S., Shevade, S., Bhattacharyya, C., and Murthy, K. (1999). Improvements to platt's smo algorithm for svm classifier design. Technical Report 99-14, National University of Singapore, Singapore.
- [Kressel, 1999] Kressel, U. (1999). Pairwise classification and support vector machines. In Schölkopf, B., Burges, C., and Smola, A., editors, *Advances in Kernel Methods: Support Vector Learning*. MIT Press, Cambridge, MA.
- [Kwok, 1999] Kwok, J.-Y. (1999). Moderating the outputs of support vector machine classifiers. *IEEE Transactions on Neural Networks*, 10(5):1018–1031.
- [MacWilliams and Sloane, 1993] MacWilliams, F. J. and Sloane, N. J. A. (1993). *The Theory of Error-Correcting Codes*. Elsevier Science Publishers B.V., 8th edition.
- [Marroquin et al., 1987] Marroquin, J., Mitter, S., and Poggio, T. (1987). Probabilistic solution of ill-posed problems in computational vision. *Journal of the American Statistical Association*, 82:76–89.
- [Mayoraz and Alpaydin, 1999] Mayoraz, E. and Alpaydin, E. (1999). Support vector machines for multi-class classification. In *Proceedings of the 5th International Work-Conference on Artificial and Natural Neural Networks IWANN'99*, pages 833–842, Alicante, Spain.
- [Moreira and Mayoraz, 1998] Moreira, M. and Mayoraz, E. (1998). Improved pairwise coupling classification with correcting classifiers. In Nédellec, C. and Rouveiro, C., editors, *Proceedings of the European Conference on Machine Learning ECML'98*, volume 1398 of *Lecture Notes in Artificial Intelligence*, pages 160–171, Chemnitz, Germany. Springer. IDIAP-RR 97-09.
- [Pérez-Cruz et al., 2000] Pérez-Cruz, F., Alarcón-Diana, P. L., Navia-Vázquez, A., and Artés-Rodríguez, A. (2000). Fast training of support vector classifiers. In Solla, S. A., Leen, T. K., and Müller, K.-R., editors, *Advances in Neural Information Processing Systems*, volume 12, Cambridge, MA. MIT Press.
- [Phillips, 1999] Phillips, P. J. (1999). Support vector machines applied to face recognition. In Kearns, M. S., Solla, S. A., and Cohn, D. A., editors, *Advances in Neural Information Processing Systems*, volume 11, Cambridge, MA. MIT Press.
- [Platt, 1999a] Platt, J. C. (1999a). Fast training of support vector machines using sequential minimal optimization. In Schölkopf, B., Burges, C., and Smola, A., editors, *Advances in Kernel Methods: Support Vector Learning*. MIT Press, Cambridge, MA.
- [Platt, 1999b] Platt, J. C. (1999b). Probabilistic outputs for support vector machines and comparisons to regularized likelihood methods. In Smola, A., Bartlett, P.,

- Schölkopf, B., and Schuurmans, D., editors, *Advances in Large Margin Classifiers*. MIT Press, Cambridge, MA.
- [Platt, 1999c] Platt, J. C. (1999c). Using analytic qp and sparseness to speed training of support vector machines. In Kearns, M. S., Solla, S. A., and Cohn, D. A., editors, *Advances in Neural Information Processing Systems*, volume 11, Cambridge, MA. MIT Press.
- [Platt et al., 2000] Platt, J. C., Cristianini, N., and Shawe-Taylor, J. (2000). Large margin DAGs for multiclass classification. In Solla, S. A., Leen, T., and Müller, K.-R., editors, *Advances in Neural Information Processing Systems*, volume 12. MIT Press.
- [Poggio and Girosi, 1989] Poggio, T. and Girosi, F. (1989). A theory of networks for approximation and learning. Technical Report AI 1140, MIT, Cambridge, MA.
- [Poggio and Girosi, 1990] Poggio, T. and Girosi, F. (1990). Networks for approximation and learning. *Proceedings of the IEEE*, 78(9):1481–1497.
- [Poggio and Girosi, 1998] Poggio, T. and Girosi, F. (1998). A sparse representation for function approximation. *Neural Computation*, 10:1445–1454.
- [Polit et al., 2000a] Polit, M., Angulo, C., Waissman, J., Dahhou, B., and Català, A. (2000a). Méthodes de classification des situations dans une station de traitement des eaux usées: application à la détection de fautes et à la supervision. In *Journées Thématisques ‘Automatique et Environnement’*, page Papier invité, Nancy, France.
- [Polit et al., 2000b] Polit, M., González, A., Waissman, J., Angulo, C., and et al. (2000b). Advanced control of a wastewater plant. In *5th International Symposium on Systems Analysis and Computing in Water Quality Management, WATERMA-TEX 2000*, Gent, Belgium.
- [Pontil et al., 1998] Pontil, M., Rifkin, R., and Evgeniou, T. (1998). From regression to classification in support vector machines. Technical Report AI 1649, MIT, Cambridge, MA.
- [Powell, 1987] Powell, M. (1987). Radial basis functions for multivariable interpolation: a review. In Mason, J. and Cox, M., editors, *Algorithms for Approximation*. Clarendon Press, Oxford.
- [Quinlan, 1986] Quinlan, J. (1986). Induction of decision trees. *Machine Learning*, 1:81–106.
- [Smola, 1998] Smola, A. (1998). *Learning with kernels*. PhD thesis, Department of Computer Science, Technical University Berlin, Germany.
- [Smola and Schölkopf, 1998a] Smola, A. J. and Schölkopf, B. (1998a). From regularization operators to support vector kernels. In Jordan, M. I., Kearns, M. J., and Solla, S. A., editors, *Advances in Neural Information Processing Systems*, volume 10, pages 343–349, Cambridge, MA. MIT Press.

- [Smola and Schölkopf, 1998b] Smola, A. J. and Schölkopf, B. (1998b). A tutorial on support vector regression. Technical Report NC-TR-98-030, Royal Holloway, University of London, Egham, UK.
- [Smola et al., 1998] Smola, A. J., Schölkopf, B., and Müller, K.-R. (1998). The connection between regularization operators and support vector kernels. *Neural Networks*, 11:637–649.
- [Sobel, 1990] Sobel, M. (1990). Complete ranking procedures with appropriate loss functions. *Communications in Statistics – Theory and Methods*, 19(12):4525–4544.
- [Tikhonov and Arsenin, 1977] Tikhonov, A. and Arsenin, V. (1977). *Solution of ill-posed problems*. W.H. Winston, Washington, DC.
- [Tipping, 2000] Tipping, M. E. (2000). The relevance vector machine. In Solla, S. A., Leen, T., and Müller, K.-R., editors, *Advances in Neural Information Processing Systems*, volume 12. MIT Press.
- [Vapnik, 1995] Vapnik, V. (1995). *The nature of statistical learning theory*. Springer Verlag, New York.
- [Vapnik, 1998] Vapnik, V. (1998). *Statistical learning theory*. Wiley, New York.
- [Wahba, 1999] Wahba, G. (1999). Support vector machines, reproducing kernel hilbert spaces and the randomized gacv. In Schölkopf, B., Burges, C., and Smola, A., editors, *Advances in Kernel Methods: Support Vector Learning*, pages 69–88. MIT Press, Cambridge, MA.
- [Wahba, 2000] Wahba, G. (2000). Generalization and regularization in nonlinear learning systems. Technical Report 1015, Dept. of Statisitcs, University of Wisconsin, USA.
- [Weston and Watkins, 1998] Weston, J. and Watkins, C. (1998). Multi-class support vector machines. Technical Report CSD-TR-98-04, Royal Holloway, University of London, Egham, UK.