Bibliography

[1] J.L. Hutchens and M.D. Alder. Natural language grammatical inference. Honours thesis 94-03, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1994.

[2] M.D. Alder. Stochastic grammatical inference : The prediction and smoothing of time series of symbols. Master's thesis, The University of Western Australia, 1988.

[3] C.E Shannon and W. Weaver. *The Mathematical Theory of Communication*. The University of Illinois Press, 1949.

[4] C. Cherry. *Information Theory*. Butterworths Scientific Publications, 1956.

[5] R. Chandraasekhar. *Systematic segmentation of mammograms*. PhD thesis, Centre for Intelligent Information Processing Systems, Department of Electrical and Electronic Engineering, The University of Western Australia, Nedlands, WA 6907, Australia, October 1996.

[6] S. Tham. Analysis of ultrasound images of the prostate gland: Geometric transformations and noise reduction. Master's thesis, Centre for Intelligent Information Processing Systems, Department of Electrical and Electronic Engineering, The University of Western Australia, Nedlands, WA 6907, Australia, January 1997.

[7] R.A. McLaughlin and M.D. Alder. Syntactic recognition of simple shapes. In *Proceedings of the Third Australian and New Zealand Conference on Intelligent Information Systems*, pages 5–9, Perth, December 1993. Available online: http://ciips.-ee.uwa.edu.au/Papers/Conference_Papers/1993/06/.

[8] R.A. McLaughlin and M.D. Alder. The Hough Transform versus the UpWrite. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 20(4):396–400, April 1998.

[9] G. McLachlan. *Mixture Models : Inference and Applications to Clustering*. M. Dekker New York, 1988.

[10] P. McKenzie and M.D. Alder. Initializing the EM algorithm for use in Gaussian mixture modelling. In E.S. Gelsema and L.N. Kanal, editors, *Pattern Recognition in Practice IV*, pages 91–105. Elsevier Science B.V., June 1994.

[11] B. Cooper and M.D. Alder. Automated identification of southern right whales. Honours thesis 94-02, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1994.

[12] D. Hankerson, G.A. Harris, and P.D. Johnson Jr. *Introduction to Information Theory and Data Compression*. CRC Press, 1988.

[13] J.P.R. Williams and M.D. Alder. Robot vision. Honours thesis 97-01, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1997.

[14] M.D. Alder. Principles of pattern classification: Statistical, neural net and syntactic methods of getting robots to see and hear. Available online at "ftp://ciips.ee.uwa.-edu.au/pub/syntactic/book/", August 1994.

[15] P. Debevec. A neural network for facial feature location. Technical Report CS283, Computer Vision Group, UC Berkeley, October 1992.

[16] L. Priese and V. Rehrmann. On hierarchical color segmentation and applications. In *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition*, pages 633–634, June 1993.

[17] X. Lin and S. Chen. Color image segmentation using modified HSI system for road following. In *IEEE International Conference on Robotics and Automation*, volume 3, pages 1998–2003, April 1991.

[18] M.A. Turk, D.G. Morgenthaler, K.D. Gremban, and M. Marra. VITS - A vision system for autonomous land vehicle navigation. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 10(3):342–361, May 1988.

[19] E. Kavallieratos, N. Antoniades, N. Fakotakis, and G. Kokkinakis. Extraction and recognition of handwritten alphanumeric characters from application forms. In *13th International Conference on Digital Signal Processing*, volume 2, pages 695–699, July 1997.

[20] Robert M. Haralick and Linda G. Shapiro. *Computer and Robot Vision*, volume I. Addison-Wesley, June 1992.

[21] I. Cseke. A fast segmentation scheme for white blood cell images. In *11th IAPR International Conference on Pattern Recognition. Conference C: Image, Speech and Signal Analysis*, volume 3, pages 530–533, September 1992.

[22] C. Arcelli and L. Serino. Finding near-convex shapes in complex patterns. In H. Bunke, editor, *Advances in Structural and Syntactic Pattern Recognition*, pages 217–226. World Scientific, 1992.

[23] J. Russ. *The Image Processing Handbook*. IEEE Press, 2nd edition, 1995.

[24] P.P. Jonker and J.J. Gerbrands. Image processing hardware for counting massive object streams. In *11th IAPR International Conference on Pattern Recognition. Conference D: Architectures for Vision and Pattern Recognition*, volume 4, pages 31–33, September 1992.

[25] A. Sokkarie and J. Osborne. Object counting and sizing. In *Proceedings of the IEEE SOUTHEASTCON '94*, pages 380–382, April 1994.

[26] K. Hoang and A. Nachimuthu. Image processing techniques for leather hide ranking in the footwear industry. *Machine Vision and Applications Journal*, 9:119–129, 1996.

[27] M. Betke and N.C. Makris. Fast object recognition in noisy images using simulated annealing. Technical Report 1510, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, December 1994.

[28] D.J. Beymer. Face recognition under varying pose. Technical Report 1461, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, December 1993.

[29] D. Beymer, A. Shashua, and T. Poggio. Example based image analysis and synthesis. Technical Report 1431, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, November 1993.

[30] D.J. Beymer and T. Poggio. Face recognition from one example view. Technical Report 1536, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, September 1995.

[31] D. Beymer. Vectorizing face images by interleaving shape and texture computations. Technical Report 1537, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, September 1995.

[32] A. Nikolaidis, C. Kotropoulos, and I. Pitas. Facial feature extraction using adaptive Hough Transform, template matching and active contour models. In *13th International Conference on Digital Signal Processing*, volume 2, pages 865–868, July 1997.

[33] R.A. McLaughlin and M.D. Alder. The Hough Transform versus the UpWrite. Technical Report 97-02, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1997.

[34] M. Spivak. *A Comprehensive Introduction to Differential Geometry*, volume 1. Waltham, Massachusetts, 1970.

[35] E.R. Davies. *Machine Vision: Theory, Algorithms and Practicalities*. Academic Press, 1990.

[36] T. Pavlidis and H. Feng. Shape discrimination. In K.S. Fu, editor, *Syntactic Pattern Recognition, Applications*, pages 125–145. Springer-Verlag, 1977.

[37] A.K. Jain. *Fundamentals of Digitial Image Processing.* Prentice Hall, 1989.

[38] K. Abe, C. Arcelli, T. Hisajima, and T. Ibaraki. Parts of planar shapes. *Pattern Recognition Society Journal*, 29(10):1703–1711, 1996.

[39] A. Leon-Garcia. *Probability and Random Processes.* Addison-Wesley, May 1989.

[40] R.M. Haralick and L.G. Shapiro. *Computer and Robot Vision*, volume II. Addison-Wesley, 1993.

[41] R.C. Gonzalez and R.E. Woods. *Digital Image Processing.* Addison-Wesley, September 1993.

[42] J.L. Horner. *Optical Signal Processing.* Academic Press, 1987.

[43] P.C. Hew and M.D. Alder. Recognition of printed digits using zernike or orthogonal fourier-mellon moments. Technical Report 97-06, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.-uwa.edu.au/Papers/, June 1997.

[44] D.L. Kreider, R.G. Kuller, D.R. Ostberg, and F.W. Perkins. *An Introduction to Linear Analysis.* Addison-Wesley, 1966.

[45] Max Bonn and Emil Wolf. *Principles of Optics.* Cambridge University Press, sixth edition, 1997.

[46] Y. He and A. Kundu. 2-D shape classification using hidden Markov models. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 13(11):1173–1184, November 1991.

[47] A. Held and K. Abe. On the decomposition of binary shapes into maximal approximately convex subparts. In H. Bunke, editor, *Advances in Structural and Syntactic Pattern Recognition*, pages 227–236. World Scientific, 1992.

[48] A.K. Jain and A. Vailaya. Image retrieval using color and shape. *Pattern Recognition Society Journal*, 29(8):1233–1244, 1996.

[49] R. Singh, I. Pavlidis, and N.P. Papanikolopoulos. A metamorphosis-based shape recognition method. In *13th International Conference on Digital Signal Processing*, volume 2, pages 679–682, July 1997.

[50] J.M. Mendel and K.S. Fu. *Adaptive, Learning and Pattern Recognition Systems: Theory and Applications.* Number 66 in Mathematics in Science and Engineering. Academic Press, 1970.

[51] W. Siedlecki and J. Sklansky. On automatic feature selection. In C.H. Chen, L.F. Pau, and P.S.P Wang, editors, *Handbook of Pattern Recognition and Computer Vision*, pages 63–87. World Scientific, 1993.

[52] W. Siedlecki and J. Sklansky. A note on genetic algorithms for large-scale feature selection. In C.H. Chen, L.F. Pau, and P.S.P Wang, editors, *Handbook of Pattern Recognition and Computer Vision*, pages 88–107. World Scientific, 1993.

[53] D. Richards and A. Jepson. What makes a good feature? Technical Report 1356, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, April 1992.

[54] P. Kovesi. *Invariant Measures of Image Features from Phase Information.* PhD thesis, Department of Psychology, The University of Western Australia, May 1996.

[55] R.M. Palenichka and P. Zinterhof. A fast structure-adaptive evaluation of local features in images. *Pattern Recognition Society Journal*, 29(9):1495–1505, 1996.

[56] M. Demi and M. Paterni. The first order absolute moment in low-level image processing. In *13th International Conference on Digital Signal Processing*, volume 2, pages 511–514, July 1997.

[57] J. Ashley, R. Barber, M. Flickner, J. Hafner, D. Lee, W. Niblack, and D. Petkovic. Automatic and semi-automatic methods for image annotation and retrieval in QBIC. Technical Report RJ 9951-87910, IBM Almaden Research Center, April 1995.

[58] K. Nagao and B.K.P. Horn. Direct object recognition using no higher than second or third order statistics of the image. Technical Report 1526, Artificial Intelligence Laboratory, Massachusetts Institute of Technology, February 1995.

[59] G.J. Earnshaw. Image complexity measure. Technical Report 92-15-022, Centre for Intelligent Systems, University of Plymouth, October 1995.

[60] R.D. Henkel. Segmentation in scale space. In *Proceedings of the 6th International Conference on Computer Analysis of Images and Pattern.* Prague, 1995.

[61] C.H. Chen, L.F. Pau, and P.S.P. Wang. *Handbook of Pattern Recognition and Computer Vision.* World Scientific, 1993.

[62] A.K. Jain and R.C. Dubes. *Algorithms for Clustering Data.* Prentice Hall, 1988.

[63] Deborah Swayne, Dianne Cook, and Andreas Buja. *User's manual for XGobi, a dynamic graphics program for data analysis implemented in the X Window system (Release 3).* Bellcore Special Report, SR-3219. Bellcore, Morristown, NJ, USA, 1994.

[64] H.S. Roy. Sharp, reliable predictions using supervised mixture models. Technical Report 1547, Department of Computer Science, Stanford University, 1995.

[65] A. Yudashkin. A topological approach to the pattern classification in neural networks. In *Proceedings of ICNN96*, volume 3, pages 1484–1487. Washington DC, June 1996.

[66] J. Rissanen. *Stochastic Complexity in Statistical Inquiry*, volume 15 of *Series in computer science*. World Scientific, 1989.

[67] E. Panayirci and R.C. Dubes. Spatial point processes and clustering tendency in exploratory data analysis. In P.A. Devijver and J. Kittler, editors, *Pattern Recognition Theory and Applications*, pages 82–97. Springer-Verlag, 1987.

[68] J.V. Moreau and A.K. Jain. The bootstrap approach to clustering. In P.A. Devijver and J. Kittler, editors, *Pattern Recognition Theory and Applications*, pages 63–71. Springer-Verlag, 1987.

[69] K.S. Fu. *Digital Pattern Recognition*, volume 10 of *Communication and Cybernetics*. Springer-Verlag, 1980.

[70] D.A. Cohn, Z. Ghahramani, and M.I. Jordan. Active learning with statistical models. Technical Report 110/1522, Centre for Biological and Computational Learning, Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, January 1995.

[71] K. Ikeda and L. Xu. The probability distribution of parameters learned with the EM algorithm. In *Proceedings of ICNN96*, volume 1, page 306. Washington DC, June 1996.

[72] H. Freeman, M.Y. Chiu, D.D. Dreyfuss, I. Gorog, and R. Jain. Is industry ready for machine vision? A panel discussion. In H. Freeman and P. Rummel, editors, *Machine Vision for Inspection and Measurement*, pages 223–236. Academic Press, 1989.

[73] P.G. Cielo. *Optical Techniques for Industrial Inspection*. Academic Press, 1988.

[74] A.D. Marshall. *Computer Vision, Models, and Inspection*. World Scientific, 1992.

[75] A.F. Limas-Serafim. Natural images' segmentation for patterns' recognition using edges' pyramids and its application to the leather' defects. In *Proceedings of the 19th Conference of IEEE Industrial Electronics*, volume 3, pages 1357–1360, November 1993.

[76] J. Wilder. Finding and evaluating defects in glass. In H. Freeman and P. Rummel, editors, *Machine Vision for Inspection and Measurement*, pages 237–255. Academic Press, 1989.

[77] B. Dom. Machine vision techniques for integrated circuit inspection. In H. Freeman and P. Rummel, editors, *Machine Vision for Inspection and Measurement*, pages 257–282. Academic Press, 1989.

[78] R. Jain, A.R. Rao, A. Kayaalp, and C. Cole. Machine vision for semiconductor wafer inspection. In H. Freeman and P. Rummel, editors, *Machine Vision for Inspection and Measurement*, pages 283–314. Academic Press, 1989.

[79] P. Rummel. Applied robot vision: Combining workpiece recognition and inspection. In H. Freeman and P. Rummel, editors, *Machine Vision for Inspection and Measurement*, pages 203–221. Academic Press, 1989.

[80] G.J. Earnshaw. Syntactic image segmentation using texture. Technical Report 92-15-023, Centre for Intelligent Systems, University of Plymouth, October 1995.

[81] R.A. Clement. *Introduction to Vision Science.* Lawrence Erlbaum Associates Publishers, 1993.

[82] G.H. Granlund and H. Knutsson. *Signal Processing for Computer Vision.* Kluwer Academic Publishers, 1995.

[83] M. Tuceryan and A.K. Jain. Texture analysis. In C.H. Chen, L.F. Pau, and P.S.P Wang, editors, *Handbook of Pattern Recognition and Computer Vision*, pages 235–276. World Scientific, 1993.

[84] W.K. Pratt. *Digital Image Processing.* Wiley, New York, 2nd edition, 1991.

[85] J.G. Daugman. Uncertainty relation for resolution in space, spatial frequency, and orientation optimized by two-dimensional visual cortical filters. *Journal of the Optical Society of America A*, 2(7):1160–1169, July 1985.

[86] A.C. Bovik, M. Clark, and W.S. Geisler. Multichannel texture analysis using localized spatial filters. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 12(1):55–73, January 1990.

[87] M.M. Rizki, L.A. Tamburino, and M.A. Zmuda. Multi-resolution feature extraction from Gabor filtered images. In *IEEE National Aerospace and Electronics Conference*, volume 2, pages 819–824, May 1993.

[88] S. Lu, J.E. Hernandez, and G.A. Clark. Texture segmentation by clustering of Gabor feature vectors. In *International Joint Conference on Neural Networks*, volume 1, pages 683–688. Seattle, July 1991.

[89] J.G. Daugman. Two-dimensional spectral analysis of cortical receptive field profiles. *Vision Research*, 20:847–856, 1980.

[90] J.G. Daugman. High confidence recognition of persons by a test of statistical independence. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 15(11):1148–1161, November 1993.

[91] J.G. Daugman. Complete discrete 2-D Gabor transforms by neural networks for image analysis and compression. *IEEE Transactions on Acoustics, Speech, and Signal Processing*, 36(7):1169–1179, July 1988.

[92] T.S. Lee. Image representation using 2D Gabor wavelets. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 18(10):959–971, October 1996.

[93] G. Ravichandran and M.M. Trivedi. Circular-mellin features for texture segmentation. *IEEE Transactions on Image Processing*, 4(12):1629–1640, December 1995.

[94] S. Marcelja. Mathematical description of the response of simple cortical cells. *Journal of the Optical Society of America A*, 70(11):1297–1300, November 1980.

[95] D. Dunn, W.E. Higgins, and J. Wakeley. Texture segmentation using 2-D Gabor elementary functions. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 16(2):131–149, February 1994.

[96] J.G. Daugman and C. Downing. Gabor wavelets for statistical pattern recognition. In *The Handbook of Brain Theory and Neural Networks*, pages 414–420. MIT Press, 1995.

[97] J.G. Daugman. Entropy reduction and decorrelation in visual coding by oriented neural receptive fields. *IEEE Transactions on Biomedical Engineering*, 36(1):107–114, January 1989.

[98] J. Malik and P. Perona. A computational model of texture perception. Technical Report CSD89-491, Department of Electrical Engineering and Computer Sciences, UC Berkeley, 1989.

[99] J. Malik and P. Perona. Preattentive texture discrimination with early vision mechanisms. *Journal of the Optical Society of America A*, 7(5):923–932, May 1990.

[100] B. Julesz. Texton gradients: The texton theory revisited. *Biological Cybernetics*, 54:245–251, 1986.

[101] T. Randen and J.H. Husoy. Multichannel filtering for image texture segmentation. Technical report, Rogaland University, Norway, 1993.

[102] B.S. Manjunath and W.Y. Ma. Texture features for browsing and retrieval of image data. *IEEE Transactions on Pattern Analysis and Machine Intelligence special issue on Digital Libraries*, November 1996.

[103] H. Greenspan, R. Goodman, and R. Chellappa. Texture analysis via unsupervised and supervised learning. In *International Joint Conference on Neural Networks*, volume 1, pages 639–644. Seattle, July 1991.

[104] A. Teuner and B.J. Hosticka. Adaptive Gabor transformation for image processing. *IEEE Transactions on Image Processing*, 2(1):112–117, January 1993.

[105] A.K. Jain and F. Farrokhnia. Unsupervised texture segmentation using Gabor filters. In *IEEE International Conference on Systems, Man and Cybernetics*, pages 14–19, November 1990.

[106] A. Perry and D.G. Lowe. Segmentation of textured images. In *IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, pages 319–325, June 1989.

[107] W.Y. Ma and B.S. Manjunath. Texture features and learning similarity. In *Proceedings of IEEE International Conference on Computer Vision and Pattern Recognition*, June 1996.

[108] G.J. Earnshaw. Texture grouping using Gabor functions and discriminant analysis. Technical Report 92-15-011, Centre for Intelligent Systems, University of Plymouth, October 1994.

[109] M. Tuceryan. Moment based texture segmentation. In *11th IAPR International Conference on Pattern Recognition. Conference C: Image, Speech and Signal Analysis*, volume 3, pages 45–48, September 1992.

[110] P.P. Ohanian and R.C. Dubes. Performance and evaluation for four classes of textural features. *Pattern Recognition Society Journal*, 25(8):819–833, 1992.

[111] T.N. Tan. Texture feature extraction via visual cortical channel modelling. In *Proceedings of the 11th IAPR International Conference on Pattern Recognition*, volume 3 of *series C*, pages 607–610, September 1992.

[112] C.K. Chui. *An Introduction to Wavelets*. Academic Press, 1992.

[113] D.J. Field. Relations between the statistics of natural images and the response properties of cortical cells. *Journal of the Optical Society of America A*, 4(12):2379–2394, December 1987.

[114] G. Ravichandran and M.M. Trivedi. Texture segmentation using circular-mellin operators. In *Proceedings of International Conference of Image Processing*, volume 2, pages 635–639, November 1994.

[115] F. Oberhettinger. *Tables of Fourier Transforms and Fourier Transforms of Distributions*. Springer-Verlag, 1990.

[116] R.W Conners and C.A. Harlow. Towards a structural textural analyzer based on statistical methods. In A. Rosenfeld, editor, *Image Modeling*, pages 29–62. Academic Press, 1981.

[117] B. Julesz. Textons, the elements of texture perception, and their interactions. *Nature*, 290:91–97, March 1981.

[118] B. Julesz. *Dialogues on Perception.* MIT Press, 1995.

[119] K. Karu, A.K. Jain, and R.M. Bolle. Is there any texture in the image? *Pattern Recognition Society Journal*, 29(9):1437–1446, 1996.

[120] J. Bigun and J.M. Hans du Buf. N-folded symmetries by complex moments in Gabor space and their application to unsupervised texture segmentation. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 16(1):80–87, January 1994.

[121] J. Bigun and J.M. Hans du Buf. Geometric image primitives by complex moments in Gabor space and the application to texture segmentation. In *Proceedings of IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, pages 648–650, June 1992.

[122] P. Brodatz. *Textures: A Photographic Album for Artists and Designers.* Dover, New York, 1966.

[123] VisTEX texture database. Available online: http://www-white.media.mit.edu/-vismod/imagery/VisionTexture/vistex.html, 1997.

[124] G.A. Naghdy, M. Taube, and P.O. Ogunbona. Compact vector for national texture classification. Technical report, Deptartment of Electrical and Computer Engineering, University of Wollongong, Australia, 1995.

[125] D. Patel and T.J. Stonham. Texture image classification and segmentation using rank-order clustering. In *11th IAPR International Conference on Pattern Recognition. Conference C: Image, Speech and Signal Analysis*, volume 3, pages 92–95, September 1992.

[126] E. Oja and K. Valkealahti. Co-occurrence map: Quantizing multidimensional texture histograms. *Pattern Recognition Letters*, 17:723–730, 1996.

[127] R. Azencott, J. Wang, and L. Younes. Texture classification using windowed Fourier filers. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 19(2):149–153, February 1997.

[128] H. Greenspan, R. Goodman, R. Chellappa, and C.H. Anderson. Learning texture discrimination rules in a multiresolution system. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 16(9):894–971, September 1994.

[129] H. Greenspan, S. Belongie, P. Perona, and R. Goodman. Rotation invariant texture recognition using a steerable pyramid. In *Proceedings of the 12th International Conference on Pattern Recognition*. Jerusalem, Israel, October 1994.

[130] R.W. Picard, T. Kabir, and F. Liu. Real-time recognition with the entire Brodatz texture database. In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, pages 638–639, June 1993. Available online at "http://www-white.media.mit.edu/vismod/publications/".

[131] B.S. Manjunath and M.Y. Ma. Texture features for browsing and retrieval of image data. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 18(8):839–842, August 1996.

[132] G.L. Gimel'farb and A.K. Jain. On retrieving textured images from an image database. *Pattern Recognition Society Journal*, 29(9):1461–1483, 1996.

[133] D.F. Dunn and W.E. Higgins. Optimal Gabor-filter design for texture segmentation. In *IEEE International Conference on Acoustics, Speech, and Signal Processing*, volume 5, pages 37–40. Pennsylvania State University, April 1993.

[134] D. Dunn and W.E. Higgins. Optimal Gabor filters for texture segmentation. *IEEE Transactions on Image Processing*, 4(7):947–964, July 1995.

[135] D. Dunn and W.E. Higgins. Optimal Gabor filters for texture segmentation. Received from author, 1994.

[136] D. Dunn, W.E. Higgins, and J. Wakeley. Texture segmentation using 2-D Gabor elementary functions. Received from author, 1991.

[137] S.R. Yhann and T.Y. Young. Boundary localization in texture segmentation. *IEEE Transactions on Image Processing*, 4(6):849–856, June 1995.

[138] H.A. Malki. Image segmentation using multilayer neural networks. In *International Joint Conference on Neural Networks*, volume 4, pages 354–360, June 1992.

[139] T.P. Weldon, W.E. Higgins, and D.F. Dunn. Efficient Gabor filter design for texture segmentation. *Pattern Recognition Society Journal*, 29(12):2005–2015, 1996.

[140] A.K. Jain and F. Farrokhnia. Unsupervised texture segmentation using Gabor filters. *Pattern Recognition Society Journal*, 24(12):1167–1186, 1991.

[141] J. Mao and A.K. Jain. Texture classification and segmentation using multiresolution simultaneous autoregressive models. *Pattern Recognition Society Journal*, 25(2):173–188, 1992.

[142] T.R. Reed and J.M. Hans du Buf. A review of recent texture segmentation and feature extraction techniques. *Computer Vision, Graphics, and Image Processing*, 59(3):359–372, May 1993.

[143] D.N. Chun and H.S. Yang. Robust image segmentation using genetic algorithm with a fuzzy measure. *Pattern Recognition Society Journal*, 29(7):1195–1211, 1996.

[144] H. Sanderson and G. Crebin. Region based image coding using polynomial intensity functions. Technical report, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, March 1995.

[145] R.C. Luo, H. Potlapalli, and D.W. Hislop. Natural scene segmentation using fractal based autocorrelation. In *Proceedings of the International Conference on Industrial Electronics, Control, Instrumentation and Automation*, volume 2, pages 700–705, November 1992.

[146] R.M. Haralick. Statistical and structural approaches to texture. *Proceedings of the IEEE*, 67(5):786–804, May 1979.

[147] R.M. Haralick. Textural features for image classification. *IEEE Transactions on Systems, Man and Cybernetics*, 3(6):610–621, November 1973.

[148] J.M. Hans du Buf, M. Kardan, and M. Spann. Texture feature performance for image segmentation. *Pattern Recognition Society Journal*, 23(3/4):291–309, 1990.

[149] A. Visa. Unsupervised image segmentation based on a self-organizing feature map and a texture measure. In *11th IAPR International Conference on Pattern Recognition. Conference C: Image, Speech and Signal Analysis*, volume 3, pages 101–104, September 1992.

[150] L.S. Davis, S.A. Johns, and J.K. Aggarwal. Texture analysis using generalized cooccurence matrices. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 1(3):251–259, July 1979.

[151] J.G. Daugman and C. Downing. Demodulation, predictive coding and spatial vision. *Journal of the Optical Society of America A*, 12(4):641–660, April 1995.

[152] J.F. Haddon and J.F. Boyce. Texture segmentation and region classification by orthogonal decomposition of co-occurrence matrices. In *11th IAPR International Conference on Pattern Recognition. Conference A: Computer Vision and Applications*, volume 1, pages 692–695, September 1992.

[153] M.E. Jernigan and F. D'astous. Entropy based texture analysis in the spatial frequency domain. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 6(2):237–243, March 1984.

[154] R.S. Thau. Illuminant precompensation for texture discrimination using filters. Available online at "http://www.ai.mit.edu/articles/texture-rst-new/texture-new.html".

[155] R. Kindermann. *Markov Random Fields and their Applications.* American Mathematical Society, 1980.

[156] V.A. Malyshev and R.A. Minlos. *Gibbs Random Fields: Cluster Expansions*, volume 44 of *Mathematics and its Applications (Soviet Series).* Kluwer Academic Publishers, 1991.

[157] S. Lakshamanan and H. Derin. Simultaneous parameter estimation and segmentation of Gibbs random fields using simulated annealing. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 11(8):799–813, August 1989.

[158] H. Derin and H. Elliott. Modeling and segmentation of noisy and textured images using Gibbs random fields. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 9(1):39–55, January 1987.

[159] S. Geman and D. Geman. Stochastic relaxation, Gibbs distributions, and the Bayesian restoration of images. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 6(6):721–741, November 1984.

[160] I.M. Elfadel and R.W. Picard. Gibbs random fields, cooccurrences and texture modelling. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 16(1):24–37, January 1994.

[161] F.S. Cohen and D.B. Cooper. Simple parallel hierarchical and relaxation algorithms for segmenting noncausal Markovian random fields. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 9(2):195–219, March 1987.

[162] M. Hassner and J. Sklansky. The use of Markov random fields as models of texture. In A. Rosenfeld, editor, *Image Modeling*, pages 185–198. Academic Press, 1981.

[163] D. Geman, S. Geman, and C. Graffigne. Locating texture and object boundaries. In P.A. Devijver and J. Kittler, editors, *Pattern Recognition Theory and Applications*, pages 165–177. Springer-Verlag, 1987.

[164] K.S. Fu. *Syntactic Pattern Recognition and Applications.* Prentice Hall, 1982.

[165] J.M. Morel and S. Solimini. *Variational methods in image segmentation*, volume 14 of *Progress in Nonlinear Differential Equations and their Applications.* Birkhauser Boston, 1994.

[166] R.M. Haralick and L.G. Shapiro. Survey: Image segmentation techniques. *Computer Vision, Graphics, and Image Processing*, 29:100–132, 1985.

[167] R. Korry. Image segmentation based on oscillatory correlation. Technical Report 19, Center for Cognitive Science, The Ohio State University, April 1996.

[168] R.E. Muzzolini, Y.H. Yang, and R. Pierson. Three dimensional segmentation of volume data. In *Proceedings of International Conference of Image Processing*, volume 3, pages 488–492, November 1994.

[169] B. Sridhar, A. Phatak, and G. Chatterji. Texture-based segmentation of natural images using neural networks. In *IEEE International Conference on Systems, Man and Cybernetics*, volume 1, pages 727–732, October 1992.

[170] P.L. Worthington and E.R. Hancock. Shape and shading using robust statistics. In *13th International Conference on Digital Signal Processing*, volume 2, pages 1145–1148, July 1997.

[171] C.K. Leung and F.K. Lam. Performance analysis for a class of iterative image thresholding algorithms. *Pattern Recognition Society Journal*, 29(9):1523–1530, 1996.

[172] C.H. Lie and C.K. Lee. Segmentation of die patterns using minimum cross entropy. In *Proceedings of the 1992 International Conference on Power Electronics and Motion Control*, volume 2, pages 721–724, November 1992.

[173] T. Pavlidis. *Structural Pattern Recognition*. Springer-Verlag, 1977.

[174] D. Tseng and W. Shieh. Plume segmentation using local entropic thresholding. In *11th IAPR International Conference on Pattern Recognition. Conference C: Image, Speech and Signal Analysis*, volume 3, pages 156–159, September 1992.

[175] M. Celenk. Colour image segmentation by clustering. *IEEE Journal on Computer and Digital Techniques*, 138(5):368–376, September 1991.

[176] V.V. Vinod, S. Chaudhury, J. Mukherjee, and S. Ghose. A connectionist approach for gray level image segmentation. In *11th IAPR International Conference on Pattern Recognition. Conference C: Image, Speech and Signal Analysis*, volume 3, pages 489–492, September 1992.

[177] T. Adoli, N. Gupta, and Y. Wang. A multi-resolution segmentation scheme and its application to edge detection in cardiac MR image sequences. In *13th International Conference on Digital Signal Processing*, volume 2, pages 1135–1139, July 1997.

[178] C.K. Lee and S.P. Wong. A mathematical morphological approach for segmenting heavily noise-corrupted images. *Pattern Recognition Society Journal*, 29(8):1347–1358, 1996.

[179] J. Canny. A computational approach to edge detection. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 8(6):679–698, November 1986.

[180] J.S. Lee. Edge detection by partitioning. In E.J. Wegman and D.J. DePriest, editors, *Statistical Image Processing and Graphics*, pages 59–69. Marcel Dekker Inc., 1986.

[181] J.C. Bezdek. Fuzzy methods for edge detection. In A. Homifar and J.C. Kelly, editors, *Proceedings of the 1st Industry/Academy Symposium on Research for Future Supersonic and Hypersonic Vehicles*, pages 185–194. TSI Press, 1994.

[182] Y.T. Zhou, V. Venkateswar, and R. Chellappa. Edge detection and linear feature extraction using a 2-D random field model. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 11(1):84–95, January 1989.

[183] B.M. Sadler. Texture segmentation by change detection in second and higher order statistics. In *Conference Record of The 27th Asilomar Conference on Signals, Systems and Computers*, volume 1, pages 436–440, November 1993.

[184] L.S. Davis and A. Mitiche. Edge detection in textures. In A. Rosenfeld, editor, *Image Modeling*, pages 95–110. Academic Press, 1981.

[185] R.M. Haralick. Edge and region analysis for digital image data. In A. Rosenfeld, editor, *Image Modeling*, pages 171–184. Academic Press, 1981.

[186] A. Rosenfeld and J.S. Weszka. Picture recognition. In K.S. Fu, editor, *Digital Pattern Recognition*, pages 135–166. Springer-Verlag, 1980.

[187] M. Salotti and C. Garbay. A new paradigm for segmentation. In *11th IAPR International Conference on Pattern Recognition. Conference C: Image, Speech and Signal Analysis*, volume 3, pages 611–614, September 1992.

[188] N. Ikonomakis, K.N. Plataniotis, M. Zervakis, and A.N. Venetsanopolouos. Region growing and region merging image segmentation. In *13th International Conference on Digital Signal Processing*, volume 1, pages 299–302, July 1997.

[189] Yu Xiaohan, J. Yla-Jaaski, O. Huttunen, T. Vehkomaki, O. Sipila, and T. Katila. Image segmentation combining region growing and edge detection. In *11th IAPR International Conference on Pattern Recognition. Conference C: Image, Speech and Signal Analysis*, volume 3, pages 481–484, September 1992.

[190] S.C. Zhu. Region competition: Unified snakes, region growing, and Bayes/MDL for multi-band image segmentation. Technical Report 94-10, Harvard Robotics Laboratory, 1994.

[191] S.C. Zhu, T.S. Lee, and A.L. Yuille. Region competition: Unified snakes, region growing, energy/Bayes/MDL for multi-band image segmentation. In *Proceedings of the 5th International Conference on Computer Vision*, pages 416–423, June 1995.

[192] P.C. Chen and T. Pavlidis. Image segmentation as an estimation problem. In A. Rosenfeld, editor, *Image Modeling*, pages 9–28. Academic Press, 1981.

[193] D. Panjwani and G. Healey. Segmenting color images using Markov random field models. In *Conference Record of The 27th Asilomar Conference on Signals, Systems and Computers*, volume 1, pages 553–557, November 1993.

[194] D.K. Panjwani and G. Healey. Unsupervised segmentation of textured color images using Markov random field models. In *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition*, pages 776–777, June 1993.

[195] D.K. Panjwani and G. Healey. Markov random field models for unsupervised segmentation of textured color images. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 17(10):939–954, October 1995.

[196] J. Sheinvald, B. Dom, W. Niblack, and D. Steele. Unsupervised image segmentation using a minimum description length principle. In *11th IAPR International Conference on Pattern Recognition. Conference B: Pattern Recognition Methodology and Systems*, volume 2, pages 709–712, September 1992.

[197] C. Di Roberto, N. Di Ruocco, and S. Vitulano. A segmentation algorithm based on AI techniques. In E.S. Gelsema and L.N. Kanal, editors, *Pattern Recognition in Practice IV*, pages 153–164. Elsevier Science B.V., June 1994.

[198] J.R. Beveridge, J. Griffith, R.R. Kohler, A.R. Hansen, and E.M. Riseman. Segmenting images using localized histograms and region merging. *International Journal of Computer Vision*, 2:311–347, 1989.

[199] T. Hofmann, J. Puzicha, and J.M. Buhmann. Unsupervised segmentation of textured images by pairwise data clustering. In *Proceedings of International Conference of Image Processing*. IEEE, September 1996.

[200] H. Elliot, H. Derin, and R. Cristi. Application of the Gibbs distribution to image segmentation. In E.J. Wegman and D.J. DePriest, editors, *Statistical Image Processing and Graphics*, pages 3–24. Marcel Dekker Inc., 1986.

[201] A.A. Farag and Y. Yeap. On the effects of the Gibbs-Markov model parameters on map region segmentation using dynamic programming. In *IEEE International Conference on Systems, Man and Cybernetics*, volume 2, pages 1670–1675, October 1992.

[202] A.A. Farag. Map region segmentation based on composite random field models. In *IEEE International Conference on Acoustics, Speech, and Signal Processing*, volume 3, pages 49–52, March 1992.

[203] P.J.M. van Laarhoven and E.H.L Aarts. *Simulated Annealing: Theory and Applications*. D. Reidel Publishing Company, Kluwer Academic Publishers, 1987.

[204] P.J.M. van Laarhoven. *Theoretical and Computational Aspects of Simulated Annealing*. Stichting Mathematisch Centrum, Amsterdam, 1995.

[205] E. Aarts and J.M. van Laarhoven. Simulated annealing: A predestrian review of the theory and some applications. In P.A. Devijver and J. Kittler, editors, *Pattern Recognition Theory and Applications*, pages 179–192. Springer-Verlag, 1987.

[206] V. Granville, M. Krivanek, and J.P. Rasson. Simulated annealing: A proof of convergence. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 16(6):652–658, June 1994.

[207] G.L. Bilbro, L.C. Hall, M. Clements, and W. Liu. Simulation of real time image processing: MFA in VLSI. In *Proceedings of ICNN96*, volume 2, pages 892–893. Washington DC, June 1996.

[208] C. Bouman and B. Liu. Multiple resolution segmentation of textured images. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 13(2):99–113, February 1991.

[209] A.A. Dingle and M.W. Morrison. An algorithm for unsupervised statistical image segmentation. Unpublished Technical Report, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, October 1995.

[210] C. Bouman and M. Shapiro. Multispectral image segmentation using a multiscale model. In *IEEE International Conference on Acoustics, Speech, and Signal Processing*, volume 3, pages 565–568, March 1992.

[211] R. Chellappa, R.L. Kashyan, and B.S. Manjunath. Model-based texture segmentation and classification. In C.H. Chen, L.F. Pau, and P.S.P Wang, editors, *Handbook of Pattern Recognition and Computer Vision*, pages 277–310. World Scientific, 1993.

[212] M.L. Comer and E.J. Delp. Parameter estimation and segmentation of noisy or textured images using the EM algorithm and MPM estimation. Technical Report 215, Computer Vision and Image Processing Laboratory, Purdue University, 1994.

[213] F. Marques, J. Cunillera, and A. Gasull. Hierarchical segmentation using compound Gauss-Markov random fields. In *IEEE International Conference on Acoustics, Speech, and Signal Processing*, volume 3, pages 53–56, March 1992.

[214] Y.Y. Tang. Document structures: A survey. In P.A. Devijver and J. Kittler, editors, *Document Image Analysis*, pages 85–115. World Scientific, 1994.

[215] Y.Y. Tang, C.D. Yan, M. Cheriet, and C.Y. Suen. Automatic analysis and understanding of documents. In C.H. Chen, L.F. Pau, and P.S.P Wang, editors, *Handbook of Pattern Recognition and Computer Vision*, pages 625–654. World Scientific, 1993.

[216] H.S. Baird. Background structure in document images. In H. Bunke and P.S.P. Wang, editors, *Document Image Analysis*, pages 17–34. World Scientific, 1994.

[217] H.F. Jiang, C.C. Han, and K.C. Fan. A fast approach to the detection and correction of skew documents. *Pattern Recognition Letters*, 18:675–686, 1997.

[218] A.K. Jain, S.K. Bhattacharjee, and Y. Chen. On texture in document images. In *Proceedings 1992 IEEE Computer Society Conference on Computer Vision and Pattern Recognition*, pages 677–680, June 1992.

[219] N. Chaddha, R. Sharma, A. Agrawal, and A. Gupta. Text segmentation in mixed-mode images. In *Conference of the 28th Asilomar Conference on Signals, Systems and Computers*, volume 2, pages 1356–1361, November 1994.

[220] D.M. Serenyi. Segmenting workstation screen images. Honors Thesis 289, Department of Computer Science, Dartmouth College, 1996.

[221] K.S. Fu and J.K. Mui. A survey on image segmentation. *Pattern Recognition Society Journal*, 13:3–16, 1981.

[222] Y.J. Zhang. A survey on evaluation methods for image segmentation. *Pattern Recognition Society Journal*, 29(8):1335–1346, 1996.

[223] M. Kocheisen, U.A. Muller, and G. Troster. A neural network for grey level and color correction in photofinishing. In *Proceedings of ICNN96*, volume 4, pages 2166–2167. Washington DC, June 1996.

[224] M. Chapron. A new chromatic edge detector used for color image segmentation. In *11th IAPR International Conference on Pattern Recognition. Conference C: Image, Speech and Signal Analysis*, volume 3, pages 311–314, September 1992.

[225] D.L. MacAdam. *Color Measurement: Theme and Variations*. Springer-Verlag, 1981.

[226] P.S. Williams and M.D. Alder. Image segmentation using an entropic UpWrite. Technical Report 97-03, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, November 1996.

[227] J.T. Allen and T. Huntsberger. Comparing color edge detection and segmentation methods. In *Proceedings on the Energy and Information Technologies in the Southeast*, volume 2, pages 722–728, April 1989.

[228] Y. Ohta. *Knowledge-based Interpretation of Outdoor Natural Color Scenes*. Number 4 in Research notes in artificial intelligence. Pitman Advanced Publishing Program, 1985.

[229] T. Uchiyama and M.A. Arbib. Color image segmentation using competitive learning. *IEEE Transactions on Pattern Analysis and Machine Intelligence*, 16(12):1197–1206, December 1994.

[230] R. Jackson, L. MacDonald, and K. Freeman. *Computer Generated Color*. John Wiley and Sons, 1994.

[231] Q.T. Luong. Color in computer vision. In C.H. Chen, L.F. Pau, and P.S.P Wang, editors, *Handbook of Pattern Recognition and Computer Vision*, pages 311–368. World Scientific, 1993.

[232] S.F. Chang, J.R. Smith, and H. Wang. Automatic feature extraction and indexing for content-based visual query. Technical Report CTR 414-95-20, Columbia University, January 1995.

[233] H. Harms and H.M. Aus. Tissue image segmentation with multicolor, multifocal algorithms. In P.A. Devijver and J. Kittler, editors, *Pattern Recognition Theory and Applications*, pages 519–528. Springer-Verlag, 1987.

[234] B. Cramariuc, M. Gabbouj, and J. Astola. Clustering based region growing algorithm for color segmentation. In *13th International Conference on Digital Signal Processing*, volume 2, pages 857–860, July 1997.

[235] P.R. Chang. Image boundary via intensity, color, and texture segmentation. Technical Report 93-53, Electronics Research Laboratory, College of Engineering, UC Berkeley, July 1993.

[236] K. Hirata and T. Kato. Query by visual example: Content based image retrieval. In *Advances in database technology, EDBT '92*, volume 580 of *Lecture Notes in Computer Science*, pages 56–71. Springer-Verlag, 1992.

[237] D.A. Forsyth, J. Malik, M.M. Fleck, H. Greenspan, T. Leung, S. Belongie, C. Carson, and C. Bregler. Finding pictures of objects in large collections of images. In *International Workshop on Object Recognition*, Cambridge, April 1996.

[238] B.M. Mehtre, M.S. Kankanhalli, and A.D. Narasimhahlu. Color matching for image retrieval. *Pattern Recognition Letters*, 16:325–331, March 1995.

[239] M.J. Swain and D.H. Ballard. Color indexing. *International Journal of Computer Vision*, 7:1:11–23, 1991.

[240] D.A. Forsyth and M. Fleck. Finding naked people. Journal version, in review. Referer to http://http.cs.berkeley.edu/~daf/, 1996.

[241] R.I. Taylow and R.H. Lewis. Colour image segmentation using boundary relaxation. In *11th IAPR International Conference on Pattern Recognition. Conference C: Image, Speech and Signal Analysis*, volume 3, pages 721–724, September 1992.

[242] C. Connolly, S. Littlewood, and E.S. King. A system for the segmentation of colour images. In *Third International Conference on Image Processing and its Application*, pages 441–444, July 1989.

[243] M. Nappi, G. Polese, and G. Tortora. An image indexing technique based on contractive functions. *Proceedings of 8th International Conference on Computing and Information*, 2(1):932–953, June 1996.

[244] R. Finn. Query by image content. *IBM Research*, 3:22–25, 1996.

[245] S.F. Chang. Content-based indexing and retrieval of visual information. *IEEE Signal Processing Magazine*, 17(2):45–48, July 1997.

[246] A. Pentland, R.W. Picard, and S. Sclaroff. Photobook: Content-based manipulation of image databases. *International Journal of Computer Vision*, 18(3):233–254, 1986.

[247] M.M. Fleck, D.A. Forsyth, and C. Bregler. Finding naked people. In *Proceedings of the Fourth European Conference on Computer Vision*, 1996.

[248] D.A. Forsyth and M. Fleck. Body plans. In *Proceedings of IEEE Conference on Computer Vision and Pattern Recognition*, Puerto Rico, June 1997.

[249] R.S. Gray. Content-based image retrieval: color and edges. Technical Report 252, Dartmouth College Computer Science Department, March 1995.

[250] Virage. Visual information retrieval (VIR). Refer to "http://www.virage.com/", 1998.

[251] D. Petkovic and C. Okon. IBM's image recognition tech for database at work: QBIC or not QBIC? *Advanced imaging*, pages 63–65, May 1995.

[252] B. Holt and L. Hartwick. Retrieving art images by image content: The UC Davis QBIC project. *Aslib Proceedings*, 46(10):243–248, October 1994.

[253] D. Petkovic. IBM's query by image content (QBIC). Online demonstration at "http://www.qbic.almaden.ibm.com/", 1997.

[254] P. Aigrain, H. Zhang, and D. Petkovic. Content-based representation and retrieval of visual media: A state-of-the-art review. In *Multimedia tools and applications*, volume 3, pages 179–202. Kluwer Academic Publishers, 1996.

[255] R. Barber, M. Flickner, J. Hafner, D. Lee, W. Niblack, D. Petkovic, J. Ashley, T. McConnel, J. Ho, J. Jang, D. Berkowitz, P. Yanker, M. Vo, D. Haas, D. Lassig, S. Tate, A. Chang, P. van Houten, J. Chang, T. Petersen, D. Lutrell, M. Snedden, P. Faust, C. Matteucci, M. Rayner, R. Peters, W. Beck, and J. Witsett. Ultimedia manager: Query by image content and its applications. In *Digest of papers of the spring COMPCON*, pages 424–429. IEEE, March 1994.

[256] J.R. Smith and S.F. Chang. Automated image retrieval using color and texture. Technical Report CTR 408-95-14, Columbia University, July 1995.

[257] J.R. Smith and S.F. Chang. Local color and texture extraction and spatial query. In *Proceedings of International Conference of Image Processing*, Lausanne, Switzerland, September 1996.

[258] J.R. Smith. Visualseek. Online demonstration at "http://www.ctr.columbia.edu/-VisualSEEk/", 1998.

[259] J.R. Smith and S.F. Chang. VisualSEEk: A fully automated content-based image query system. In *ACM Multimedia '96*, pages 87–98. Boston MA, USA, November 1996.

[260] J.R. Smith and S.F. Chang. Querying by color regions using the visualSEEk content-based visual query system. In *Intelligent Multimedia Information Retrieval, IJCAI*, 1997.

[261] D.A. Forsyth, J. Malik, S. Belongie, and C. Carson. Finding pictures of objects in large collections of images. In *Proceedings of ECCV'96 Workshop on Object Representation*, 1996.

[262] C. Carson and V.E. Ogle. Storage and retrieval of feature data for a very large online image collection. *Bulletin of the Technical Committee on Data Engineering*, 19(4):19–27, December 1996.

[263] S. Belongie, C. Carson, H. Greenspan, and J. Malik. Recognition of images in large databases using color and texture. In *CVPR '97*, 1997.

[264] S. Belongie, C Carson, H. Greenspan, and J. Malik. Recognition of images in large databases using a learning framework. Technical Report 939, Computer Vision Group, UC Berkeley, 1997.

[265] C Carson, S. Belongie, H. Greenspan, and J. Malik. Region-based image querying. In *CVPR97 Workshop*, 1997.

[266] S. Belongie, R. Blasi, and K. Murphy. Grouping of color and texture feature for automated image annotation. Technical Report CS280, Computer Vision Group, UC Berkeley, April 1996.

[267] Corel-Corperation. Corel professional photos: CD ROM. Refer to "http://-www.corel.com/products/clipartandphotos/photos/index.htm", 1997.

[268] R.C. Gonzalez and M.G. Thomason. *Syntactic Pattern Recognition.* Addison-Wesley, 1978.

[269] H. Bunke and A. Sanfeliu. *Syntactic and Structural Pattern Recognition: Theory and Applications*, volume 7 of *Series in Computer Science*. World Scientific, 1990.

[270] K.S. Fu. *Syntactic Pattern Recognition, Applications*, volume 14 of *Communication and Cybernetics*. Springer-Verlag, 1977.

[271] S. Banks. *Signal Processing, Image Processing and Pattern Recognition*. Prentice Hall, 1990.

[272] G. Bundell. Computer systems 300, course notes. Department of Electrical and Electronic Engineering, The University of Western Australia, 1993.

[273] K.S. Fu. Syntactic image modeling using stochastic tree grammars. In A. Rosenfeld, editor, *Image Modeling*, pages 153–169. Academic Press, 1981.

[274] J.W. Tai and Y.J. Liu. Chinese character recognition. In H. Bunke and A. Sanfeliu, editors, *Syntactic and Structural Pattern Recognition: Theory And applications*, pages 415–452. World Scientific, 1990.

[275] H. Bunke. Structural and syntactic pattern recognition. In C.H. Chen, L.F. Pau, and P.S.P Wang, editors, *Handbook of Pattern Recognition and Computer Vision*, pages 163–209. World Scientific, 1993.

[276] M.A. Eshera, H.S. Don, K. Matsumoto, and K.S. Fu. A syntactic approach for SAR image analysis. In E.J. Wegman and D.J. DePriest, editors, *Statistical Image Processing and Graphics*, pages 71–92. Marcel Dekker Inc., 1986.

[277] J.L. Hutchens and M.D. Alder. Finding structure via compression. In *Proceedings of the International Conference on Computational Language Learning*, pages 79–82, January 1998. Available online: http://ciips.ee.uwa.edu.au/Papers/-Conference_Papers/1998/01/.

[278] J.L. Hutchens and M.D. Alder. Language acquisition and data compression. In *Australasian Natural Language Processing Summer Workshop*, 1997. Available online: http://ciips.ee.uwa.edu.au/Papers/Conference_Papers/1997/01/.

[279] J.L. Hutchens and M.D. Alder. Introducing MegaHAL. In *Proceedings of the Human-Computer Communication Workshop*, pages 271–274, January 1998. Available online: http://ciips.ee.uwa.edu.au/Papers/Conference_Papers/1998/02/.

[280] M.D. Alder. Topological stochastic grammars. In E.S. Gelsema and L.N. Kanal, editors, *Pattern Recognition in Practice IV*, pages 45–58. Elsevier Science B.V., June 1994.

[281] M.D. Alder, C.J.S. deSilva, and R.A. McLaughlin. Topological stochastic grammars. In *IEEE Information Theory Conference*, December 1993. Available online: http://ciips.ee.uwa.edu.au/Papers/Conference_Papers/1993/09/.

[282] G. Lim, C.J.S. deSilva, M.D. Alder, and Y. Attikiouzel. Syntactic pattern recognition of moving objects in domestic environment. Technical Report 93-07, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1993.

[283] R.A. McLaughlin and M.D. Alder. Recognising cubes in images. In E.S. Gelsema and L.N. Kanal, editors, *Pattern Recognition in Practice IV*, pages 59–72. Elsevier Science B.V., June 1994.

[284] R.A. McLaughlin and M.D. Alder. The Hough Transform versus the UpWrite. Technical Report 95-03, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1996.

[285] R.A. McLaughlin and M.D. Alder. Randomized Hough Transform: Improved ellipse detection with comparison. Technical Report 97-01, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1997.

[286] R.A. McLaughlin. Randomized Hough Transform: Improved ellipse detection with comparison. *Pattern Recognition Letters*, 1998.

[287] S.G. Lim. *Visual object shape recognition using hierarchical syntax extraction.* PhD thesis, Centre for Intelligent Information Processing Systems, Department of Electrical and Electronic Engineering, The University of Western Australia, Nedlands, WA 6907, Australia, January 1997.

[288] G. Lim, M.D. Alder, and C.J.S. deSilva. Syntactic pattern classification of moving objects in a domestic environment. In E.S. Gelsema and L.N. Kanal, editors, *Pattern Recognition in Practice IV*, pages 75–89. Elsevier Science B.V., June 1994.

[289] M.D. Alder. Topological stochastic grammars. Technical Report 94-03, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1994.

[290] R.A. McLaughlin and M.D. Alder. Recognition of infra red images of aircraft rotated in three dimensions. In *Proceedings of ANZIIS*, 1995. Available online: http://ciips.ee.uwa.edu.au/Papers/Conference_Papers/1995/04/.

[291] R.A. McLaughlin and M.D. Alder. Inference of structure: Hands. *Pattern Recognition Letters*, 15(10):957–962, October 1994.

[292] G. Lim and M.D. Alder. Calvin and Hobbes. Technical Report 95-02, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1995.

[293] R.A. McLaughlin and M.D. Alder. Algorithms for syntactic pattern recognition. Honours thesis, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1992.

[294] R.A. McLaughlin and M.D. Alder. Recognising aircraft: Automatic extraction of structure by layers of quadratic neural nets. In *Proceedings of the International Conference on Neural Networks 1994*, Orlando, Florida, 1994.

[295] G. Lim, M.D. Alder, and C.J.S. deSilva. Segmentation and classification of domestic moving objects using a syntactic approach. Technical Report 94-02, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1994.

[296] P. Dunstan and M.D. Alder. Real-time head detection. Honours thesis, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1995.

[297] P. Dunstan, G. Lim, and M.D. Alder. Real-time head detection. In *Proceedings of ICNN95*, 1995. Available online: http://ciips.ee.uwa.edu.au/Papers/-Conference_Papers/1995/06/.

[298] G. Lim, M.D. Alder, C.J.S. deSilva, and Y. Attikiouzel. Moving objects classification in a domestic environment using quadratic neural networks. Technical Report 94-07, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1994.

[299] M.D. Alder, G. Lim, and C.J.S. deSilva. The syntax of images. Technical Report 95-01, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1995.

[300] B. Cooper and M.D. Alder. Stroke detection applied to kanji characters. Technical Report 97-06, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, July 1997.

[301] P.S. Williams and M.D. Alder. Generic texture analysis applied to newspaper segmentation. In *Proceedings of ICNN96*, volume 3, pages 1664–1669, Washington DC, June 1996. Available online: http://ciips.ee.uwa.edu.au/Papers/-Conference_Papers/1996/04/.

[302] M.D. Alder, G. Lim, P. Hadingham, and Y. Attikiouzel. Quadratic neural networks. Technical Report 90-13, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, 1990. Available online: http://ciips.ee.uwa.edu.au/Papers/.

[303] P.S. Williams and M.D. Alder. Newspaper segmentation and adopted methods. Technical Report 95-08, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.edu.au/Papers/, December 1995.

[304] P.S. Williams. Computer vision image processing report. Computer Science department, The University of Western Australia, May 1994.

[305] P. Kovesi. Computer Vision 412 course notes. Computer Science department, The University of Western Australia, 1994.

[306] P.S. Williams and M.D. Alder. Generic flaw detection within images. In *Proceedings of ICNN95*, volume 1, pages 141–145, Perth, November 1995. Available online: http://ciips.ee.uwa.edu.au/Papers/Conference_Papers/1995/05/.

[307] P.S. Williams and M.D. Alder. Detection, representation and classification of anomalies in homogeneous images. Technical Report 97-07, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.-ee.uwa.edu.au/Papers/, September 1996.

[308] P.S. Williams and M.D. Alder. Technical paper on measuring local change for image segmentation. Technical Report 97-04, CIIPS, Department of Electrical and Electronic Engineering, The University of Western Australia, http://ciips.ee.uwa.-edu.au/Papers/, November 1996.

[309] P.S. Williams and M.D. Alder. Segmentation of natural images using hierarchical and syntactic methods. In *Second International Workshop on Statistical Techniques in Pattern Recognition, Sydney, Australia*, August 1998. Available online: http://ciips.-ee.uwa.edu.au/Papers/Conference_Papers/1998/03/.

[310] P.S. Williams and M.D. Alder. Segmentation of natural images for CBIR. In *14th International Conference on Pattern Recognition, Brisbane, Australia*, August 1998. Available online: http://ciips.ee.uwa.edu.au/Papers/Conference_Papers/1998/04/.