

CURRICULUM VITAE

Terrence Michael Caelli

Date of Birth: March 11, 1947

Place of Birth: Newcastle, N.S.W. Australia

Current Positions: Honorary Professorial Fellow, University of Melbourne
Contractor, Defence Science and Technologies Group, Australian Defence Organization
Scientific Consultant, Scians Ltd., Bern, Switzerland

Qualifications

1972 B.A.(Hons, First Class): Joint Mathematics & Psychology, University of Newcastle, Australia

1975 Ph.D: "Lie Algebras of Visual Perception", University of Newcastle, Australia

Research Interests

His current interests lie in Operations Research, Cognitive Engineering, Signal Processing, Machine Learning, Human and Machine Perception, and their applications in Health, Environment and Defence.

Senior Academic Positions

Technical Director Life Sciences	National ICT Australia 2011-2014
Director, Queensland Laboratory	National ICT Australia 2009-2011
Director, Canberra Laboratory	National ICT Australia, 2006-2007
Senior Principal Researcher	National ICT Australia, 2004-2006
University of Alberta, Canada	Professor, Computing Science and Manager, University Relations, iCORE: 1999-2004
Curtin University of Technology	Professor and Head of Computing Science: 1994 -1999.
University of Melbourne	Professor of Computer Science: 1989-1994.
University of Alberta, Canada	Killam Professor in Science (endowed research chair), 1982-1989.

Invitational short term positions

1997-1999 Acting Director, Centre for Mapping, NASA Commercial Space Centre,
Ohio State University, Columbus, Ohio, USA.

1977-1978 Consultant, Bell Laboratories, Murray Hill, New Jersey, USA.

Fellowships and Awards

Fellow, Institute for Electronic and Electrical Engineers (IEEE).

Fellow, International Association for Pattern Recognition (IAPR).

Convocation Medal for Professional Excellence, University of Newcastle

William Evans Visiting Fellow Award, University of Otago, New Zealand

Best paper award for Vision Interface, Canadian Image Processing and Pattern Recognition.

Two Outstanding Paper awards for the journal *Pattern Recognition*

DFG Professor, University of Munich

Industrial and Government Consulting

One year with Dr. Bela Julesz, at Bell Laboratories, New Jersey, U.S.A., where we conducted joint research on texture and shape perception, from May, 1977 to May, 1978.

Consultant to industries related to ergonomics: in particular workshop conditions, health and safety factors

Consultant to the Cybernetics group at the University of Munich 1979-1983.

Consulting to Alberta Laser Institute.

Consulting - and joint research with - Alcan, Ontario, in the area of surface inspection.

Consulting with ICONIX Engineering, Melbourne - on industrial applications of pattern recognition.

Consulting with ROFIN, Melbourne, on GIRD -Environmental Technology program.

Consultant with the Alberta Research Council, 2000-present on Forestry Inventory Systems.

Contractor, Defence Science and Technologies Group, Department of Defence, Australia (current)

Publications

Books and Special Editions

- 15 Zhou, J., Bai, X., and Caelli, T. ((2015) Computer Vision and Pattern Recognition in Environmental Informatics. IGI Global.
- 14 A. Fred, T. Caelli, R. Duin, A. Campilho, D. de Ritter (Eds.), (2004) Structural, Syntactic and Statistical Pattern Recognition, Lecture Notes in Computer Science, LNCS 3138, Springer.
- 13 Bunke, H. and Caelli, T.(Eds)(2004) Special Edition of the International Journal of Pattern Recognition and Artificial Intelligence on Graph Theory in Vision, 18, 3.
- 12 T. Caelli, A. Amin, R. Duin, M. Kamel, D. de Ritter (Eds.),(2002) Structural, Syntactic and Statistical Pattern Recognition, Lecture Notes in Computer Science, LNCS 2396, Springer.
- 11 Bunke, H. and Caelli, T.(Eds) (2001) Special Edition of the International Journal of Pattern Recognition and Artificial Intelligence on Hidden Markov Models in Vision, Vol 15, no. 1.
- 10 Rentschler, I., Caelli, T. and Bischof, W.(Eds.)(2000) Special Edition of Spatial Vision on Biological and Machine Object Recognition, Vol, 13,2-3.
- 9 Caelli, T., and Bischof, W.(1997) Machine Learning and Image Interpretation. Plenum, New York
- 8 Caelli, T., Bunke, H. and Lam, P. (Guest Editors, Spatial Computing: Vision, Multimedia and Visualization Technologies, Singapore: World Scientific, 1997. Also in: International Journal of Pattern Recognition and Artificial Intelligence, 11, Numbers 1-2, 1997.
- 7 Briscoe, G. and Caelli, T. A Compendium of Machine Learning . Ablex , 1996.
- 6 Caelli, T. (Guest Editor) Spatial Vision, Perceptual Learning and Adaptation I, 9, 4, and II, 10, 1, 1996.
- 5 Dance, S., Caelli, T., and Liu, Z.Q. SOO-PIN: A Symbolic Object-Oriented Picture Interpretation Network for Image Interpretation. World Scientific, 1995.
- 4 Slezak, P., Caelli, T. and Clark, R.(Eds.) Perspectives on Cognitive Science, New Jersey: Ablex, 1994.
- 3 Caelli, T. (Guest Editor) Human Neurobiology, 3 issues: 1985, 4(4); 1986, 5(1); 1986, 5(2).
- 2 Dodwell, P.C., & Caelli, T.M. Figural Synthesis. New Jersey: Erlbaum, 1984.
- 1 Caelli, T.M. Visual Perception: Theory and practice. Oxford: Pergamon Press, 1981.

International referred Journal Articles

- 178 Novak, A., Armstrong, N., Caelli, T. and Blair, I. (2017) Bayesian contrast measures and clutter distribution determinants of human target detection. IEEE: Transaction on Image Processing (In Press).
- 177 Yi-Ping Phoebe Chen, Caddi Johnson, Pooia Lalbakhsh, Terry Caelli,Guang Deng, David Tay, Shane Erickson, Philip Broadbridge, Amr El Refaie,Wendy Doube, Meg E. Morris (2016). Systematic review of virtual speech therapists for speech disorders. Computer Speech and Language, 37,98-128.
- 176 Stewart, C., Shokry, M., Iba, G. and Caelli, T.(2016) Circular Error Probables for Moving Targets: The Dynamic Error Probable – DEP. Journal of Guidance, Control, and Dynamics, 39,7, 1686-1692.
- 175 Lee, Y., Pathirana, P., Steinfort, C., Caelli, T.(2014) Monitoring and Analysis of Respiratory Patterns Using Microwave Doppler Radar, IEEE Journal of Translational Engineering in Health and Medicine, 2, 1-14.
- 174 Dahm, N., Bunke, H., Caelli, T., and Gao, Y. (2014). Efficient Subgraph Matching using Topological Node Feature Constraints. Pattern Recognition, 48(2):317–330.
- 173 Li, S., Ferraro, M., Caelli, T. and Pathirana, P.(2014) A Syntactic Two-Component Encoding Model for the Trajectories of Human Actions, IEEE Transactions on Biomedical and Health Informatics, 18,6,1903-1914.
- 172 Xuezhi Wang, Terry Caelli, Xiang Li and Bill Moran (2012). On Information Resolution of Radar Systems. IEEE Transactions on Aerospace and Electronic Systems (TAES), 48,4,3084-3102.
- 171 Cheng, Y., Wang, X., Caelli, T., and Moran, B. (2011) Optimal Nonlinear Estimation for Localisation of Wireless Sensor Networks . IEEE Transactions on Signal Processing, vol. 59, 12, 5674-5685.
- 170 Cheng, Y., Wang, X., Caelli, T., and Moran, B. (2011) Tracking and Localizing Moving Targets in the Presence of Phase Measurement Ambiguities. IEEE Transactions on Signal Processing, 59, 8, 3514-3525
- 169 Cheng, L., Gong, M., Schuurmans, D. , Caelli, T. (2011) Real-time Discriminative Background Subtraction. IEEE: Transactions on Image Processing, 20, 5, 1401 - 1414
- 168 Kalacska M., Bell L.S., Sanchez-Azofeifa G.A., Caelli T. (2009) Remote Detection of Mass Graves. Forensic Science International, 54, 1,159 - 166
- 167 Rentschler, I., Gschwindl, M., Brettel, H., Osman, E., and Caelli, T. (2008) Structural and view-specific representations for the categorization of three-dimensional objects. Vision Research, 48, 25, 2501-2508
- 166 Fu, Z., Robles-Kelly, A., Caelli, T., Tan, R.(2007) On Automatic Absorption Detection for Imaging Spectroscopy: A Comparative Study. IEEE Transactions on Geoscience and Remote Sensing, 11, 2,

- 3827-3844
- 165 Zhou, J., Bischof, W. and Caelli, T.(2006) Road Tracking in Aerial Images Based on Human-Computer
Interaction and Bayesian Filtering. ISPR Journal of Photogrammetry and Remote Sensing , 61, 108-124
- 164 Kalacska, M., Caelli, T., Bohlman, A., Sanchez-Azofeifa, A., Castro-Esau (2007) Hyperspectral
discrimination of tropical dry forest lianas and trees: Comparative data reduction approaches at the leaf and
canopy levels. Remote Sensing of Environment, 109, 406-415
- 163 Kalacska, M. , Sanchez-Azofeifa G.A., Rivard B. , Caelli, T. (2007) Ecological fingerprinting of
ecosystem succession: estimating secondary tropical dry forest structure and diversity using imaging
spectroscopy. Remote Sensing of Environment, 108, 82-96
- 162 Franke, A.; Caelli, T.; Kuzyk, G.; Hudson, R. (2007) Prediction of Wolf (Canis lupus) Kill-Sites Using
Hidden Markov Models. Ecological Modeling, 197, 237-246.
- 161 Cheng, L. and Caelli, T. (2007) Bayesian Stereo Matching. Computer Vision and Image
Understanding, 106, 1, 85–96.
- 160 Caetano, T., Caelli, T, Schuurmans and Barone, D. (2006) Graphical Models and Point Pattern
Matching. IEEE: Transactions on Pattern Analysis and Machine Intelligence, 28, 10, 1646-1663.
- 159 Cheng, L., Caelli, T. and Sanchez, A. (2006) Component optimization for image understanding:
a Bayesian approach. IEEE: Transactions on Pattern Analysis and Machine Intelligence, 28,5, 684-693.
- 158 Caetano, T. and Caelli, T.(2005) Approximating the problem, not the solution: an alternative view of
point set matching. Pattern Recognition, 39, 552-561.
- 157 Kalácska, M., Sánchez-Azofeifa G. A., Caelli T., Rivard B., and Boerlage B. (2005) Estimating Leaf Area
Index from Satellite Imagery using Bayesian Networks. IEEE Transactions on Geoscience and Remote
Sensing, 43, 8, 1866-1873.
- 156 Caelli, T. and Caetano, T.(2005) Graphical Models for Graph Matching: Approximate Models and Optimal
Algorithms. Pattern Recognition Letters, 26,339-346.
- 155 Caelli, T., Cheng, L. and Fang, Q. (2005) Bayesian Image Understanding: From Images to Virtual
Forests. International Journal of Robotics and Automation, 20, 1,14-25.
- 154 Castro, K. L., Sánchez-Azofeifa, G.A, and Caelli, T.(2004). Discrimination of lianas and trees with
leaf-level hyperspectral data. Remote Sensing of Environment, 90, 3, 353-372.
- 152 Caelli, T. and Kosinov, S.(2004) Inexact Graph Matching using Eigenspace Projection Clustering.
International Journal of Pattern Recognition and Artificial Intelligence, 18, 3, 329-354.
- 151 Caelli, T. and Kosinov, S.(2004) An Eigenspace Projection Clustering Method for Inexact Subgraph
Matching. IEEE: Transactions on Pattern Analysis and Machine Intelligence, 26, 4, 515-519.
- 150 Ingo Rentschler, Martin Jüttner, Erol Osman, Alexander Müller, Terry Caelli(2004) Development of
configural 3D object recognition. Behavioural Brain Research, 149, 1, 107-111.
- 149 Franke, A., Caelli, T. and Hudson, R.(2004) . Analysis of Movements and Behaviour of Caribou (Rangifer
tarandus) using Hidden Markov Models. Ecological Modeling, 173, 2-3, 259-270
- 148 Caelli, T., Downey, J and Caelli, T.(2003) Towards a Decision Support System for Health Promotion in
Nursing. Journal of Advanced Nursing, 43, 2, 170-180.
- 147 M. Takatsuka, G. A. West, S. Venkatesh and T. M. Caelli. (2003) Low-cost Interactive Active Range
Finder , Machine Vision and Application , 14, 3, 139-144.
- 146 G. Boccignone, M. Ferraro, T. Caelli, T. (2002) Generalized Spatio-chromatic Diffusion. IEEE:
Transactions on Pattern Analysis and Machine Intelligence, 24,10,1298-1309.
- 145 M. Ferraro, G. Boccignone and T. Caelli (2002) Entropy-based representation of image information.
Pattern Recognition Letters , 23, 1391-1398.
- 144 Takatsuka, M., Caelli, T. M., West, G. A. and Venkatesh, S. (2002) An application of "agent-oriented"
techniques to symbolic matching and object recognition, Pattern Recognition Letters, 23, 419 - 429.
- 143 Boccignone, G., Ferraro, M. and Caelli, T. (2001) Encoding Visual Information from Anisotropic
Transformations. IEEE: Transactions on Pattern Analysis and Machine Intelligence, 23, 2, 207-211.
- 142 Bischof, W. and Caelli, T.(2001) Learning Actions: Induction Over Spatio-Temporal Relational
Structures: CRGst. Applied Artificial Intelligence, 15, 707-722.
- 141 Caelli, T., McCabe, A. and Briscoe, G (2001) Shape Tracking and Production using Hidden Markov
Models. International Journal of Pattern Recognition and Artificial Intelligence, 15,1, 197-221.
- 140 Rentscher, I., Caelli, T., Bischof, W., and Juttner, M.(2000) Object recognition and image understanding:
Theories of Everything? Spatial Vision, 13,2-3, 129-136.
- 139 Drummond, T. and Caelli, T.(2000) Task-Specific Object Recognition and Scene Understanding.
Computer Vision and Image Understanding, 80, 315-348.
- 138 McCabe, A., Caelli, T. West, G. and Reeves, A. (2000) A Theory of Spatio-Chromatic Image
Encoding and Feature Extraction. Journal of the Optical Society of America: A, 17, 10, 1744
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- 137 Strassopolou, A., Caelli, T. and Ramirez, R.(2000) Building detection using Bayesian
Networks. International Journal of Pattern Recognition and Artificial Intelligence , 14, 6,715-734
- 136 Caelli, T. (2000) Learning Paradigms for Image Interpretation. Spatial Vision , 13,2-3, 305-315.

- 135 Strassopolou, A., Caelli, T. and Ramirez, R.(2000) Automatic Extraction of Building Statistics
from Digital Orthophotos. International Journal of Geographical Information Science, 14, 8, 795-814.
- 134 Squire, D. and Caelli, T. (2000) Invariant Signatures: Characterizing contours by their departures from
invariance. Computer Vision and Image Understanding, 77, 3, 284-316.
- 133 Wong, H., Caelli, T., and Guan, L.(2000) A Model-Based Neural Network for Edge Characterization.
Pattern Recognition, 33, 3, 427-444.
- 132 Ferraro, M., Boccignone,G. and Caelli, T.(1999) On the representation of image structures via scale space
entropy conditions. IEEE:Transactions on Pattern Analysis and Machine Intelligence, 21, 11, 1199-1204.
- 131 Caelli, T., Guan, L. and Wen, W.(1999) Modularity in Neural Computing. Proceedings of the IEEE, 87, 9,
1497-1518.
- 130 Pearce, A. and Caelli, T. (1999) Interpreting Schematics: Learning how to recognize spatio-temporal
relational structures. Computer Vision and Image Understanding, 73, 3, 391-403.
- 129 Caelli, T., West, G., Robey, M. and Osman, E.(1999). A relational learning method for pattern and object
recognition. Image and Vision Computing, 17, 391-401.
- 128 Dillon, C. and Caelli, T.(1998) Learning Image Annotation: the CITE system. Videre , 1, 2, 90-123.
- 127 McCane, B., Caelli, T., and de Vel, O.(1998) Inducing complex spatial descriptions in two dimensional
scenes. In G. Antoniou, A. Ghose and M. Truszczyński (Eds.). Learning and Reasoning with Complex
Representations, Springer, Lecture Notes in Artificial Intelligence 1359, 123-132.
- 126 Lazarescu, M. ,Caelli, T. and Venkatesh, S.(1998). Extracting Common Subtrees from Decision Trees.
International Journal of Pattern Recognition and Artificial Intelligence, 12, 6, 867-880.
- 125 McCane, B. and Caelli, T. and de Vel, O.(1998) Applications of Machine Learning to Intensity-Based 3D
Object Recognition. International Journal of Pattern Recognition and Artificial Intelligence, 11, 6, 909-931.
- 124 Lam, P., West, G. and Caelli, T.(1998) Issues in Validation of Machine Learning Techniques: Decision
Trees and Finite Training Set. Journal of Electronic Imaging: Special Edition on Computational
Intelligence in Image Processing, 7, 1, 94-103.
- 123 Caelli, T., Osman, E. and West, G.(1998) 3D matching and inspection using geometric features and
relational learning. Computer Vision and Image Understanding, 72, 3, 340-350.
- 122 Ferraro, M. and Caelli, T. (1998). Neural computations of algebraic and geometric structures.
Neural Networks, 11, 4, 699-708.
- 121 Juettner, M., Caelli, T. and Rentschler, I.(1998) Human Learning and Pattern Recognition,
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- 120 Buse, R., Liu, Z.Q., and Caelli, T. (1998) A Structural and Relational Approach to Handwritten
Word Recognition. IEEE: Systems, Man and Cybernetics , 27, 5, 847-861.
- 119 Bischof, W. and Caelli, T.(1997) Visual Learning of Patterns and Objects. IEEE: Systems, Man
and Cybernetics, 27, 6, 907-917.
- 118 Bischof, W. and Caelli, T.(1997) Scene Understanding by Rule Evaluation. IEEE:Transactions on Pattern
Analysis and Machine Intelligence, 19, 11, 1284-1289.
- 117 Cerevic, D. and Caelli, T.(1997) Region-Based Coding of Colour Images Using Karhunen-Loeve
Transform. Computer Vision, Graphics and Image Processing, 59,1, 27-38
- 116 D. Carevic and T. Caelli, (1997) Application of partial modeling techniques
for texture segmentation, Journal of the Optical Society of America: A, 14, 11, 2924 - 2937.
- 115 Caelli, T. and Bischof, W.(1997) Machine Learning and Computer Vision. International Journal of
Pattern Recognition and Artificial Intelligence, 11, 1, 143-168.
- 114 Caelli, T., Dillon, C., Osman, E. and Kreiger, G.(1997) The IPRS image processing and pattern recognition
system. Spatial Vision , 11, 1, 107-116.
- 113 Chandrasekaran,V., Palaniswami, M. and Caelli, T.(1996). Range Image Segmentation by a Dynamical
Neural Network Architecture. Pattern Recognition , 29, 2, 315-330.
- 112 Chandrasekaran,V.,Palaniswami,M. and Caelli, T.(1996) Spatio-temporal Feature Maps using Gated
Neuronal Architecture. IEEE Transactions on Neural Networks, 6, 5, 1119-1131.
- 111 Buse, R., Zhi-Qiang Liu and Caelli, T.(1996). Using Gabor filters to measure the physical parameters of
lines. Pattern Recognition, 29, 4, 615-627.
- 110 Caelli, T. and Bischof, W.(1996) Machine Learning Paradigms for Pattern Recognition and Image
Understanding. Spatial Vision, 10, 1, 87-103.
- 109 Rentschler, I., Barth, E., Caelli, T.,Zetsche, C. and Juttner, M.(1996) Generalisation of Form in Visual
Pattern Classification. Spatial Vision, 10, 1, 59-85.
- 107 Juettner, M., Caelli, T. and Rentschler, I.(1996) Recognition by Parts: a Computational Approach to
Human Learning and Generalization of Shapes. Biological Cybernetics, 74, 521-535.
- 106 Gill, T., Robey, M. and Caelli, T. (1996). A Review of Current Approaches to the Optimum
Open-Pit Planning Problem. Australian Mining Journal, 1, 29-39.
- 105 Kay, G. and Caelli, T. (1995) Estimating the Parameters of an Illumination Model Using Photometric
Stereo. Computer Vision, Graphics and Image Processing, 57, 5, 365-388.
- 104 Xu, S., Capson, D. and Caelli, T.(1995). Range Measurement from Defocus Gradient. Machine Vision
and Applications, 8, 179-186.
- 103 Kay, G. and Caelli, T. (1994) Inverting an Illumination Model from Range and Intensity Maps. Computer,

- Vision, Graphics and Image Processing, 59, 2, 183-201.
- 102 Caelli, T., and Dreier, A. (1994) Variations on the Evidence-Based Object Recognition Theme. Pattern Recognition, 27, 2, 185-204.
- 101 Caelli, T. and Bischof, W. (1994) Computational Approaches to Human Pattern Recognition. Spatial Vision, 8, 1, 57-76.
- 100 Ferraro, M. and Caelli, T.(1994) Lie transformation groups, integral transforms, and invariant pattern recognition. Spatial Vision, 8, 1, 33-44.
- 99 Bischof, W. and Caelli, T. (1994) Learning Structural Descriptions of Patterns: A New Technique for Conditional Clustering and Rule Generation. Pattern Recognition, 27, 5, 689-698.
- 98 Rentschler, I., Juttner, M. and Caelli, T. (1994) Probabilistic Analysis of Human Supervised Learning and Classification. Vision Research, 34, 669-687.
- 97 Pearce, A., Caelli, T. and Bischof, W. (1994) Learning Structural Descriptions: Applications in Computer Vision. Applied Intelligence, 4, 257-268.
- 96 Pearce, A., Caelli, T. and Bischof, W.(1994). Rulegraphs for Graph Matching and Pattern Recognition. Pattern Recognition, 27, 9, 1231-1248.
- 95 Berkman, J. and Caelli, T.(1994) Computation of Surface Geometry and Segmentation using Covariance Techniques. IEEE: Transactions on Pattern Analysis and Machine Intelligence., 16, 11, 1114-1116.
- 94 Caelli, T., and Reye, D. (1993) Classification of Images by Colour, Texture and Shape. Pattern Recognition, 26, 4, 461-470.
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- 92 Caelli, T., Manning, M. and Finlay, D. (1993) A general correspondence approach to apparent motion. Perception, 22, 185-192.
- 91 Barth, E., Caelli, T. and Zetsche, C. (1993) Image Encoding, Labelling and Reconstruction from Differential Geometry. Computer Vision, Graphics and Image Processing: GMIP, 55, 6, 428-446.
- 90 Caelli, T., Squire, D., and Wild, T. (1993) Model-Based Neural Networks. Neural Networks, 6, 613-625.
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- 88 Barth, E., Caelli, T. and Zetsche, C. (1993) Image Encoding, Labeling and Reconstruction from Differential Geometry. Computer Vision, Graphics and Image Processing: GMIP, 55, 6, 428-446.
- 87 Giulianini, F., Ferraro, M., and Caelli, T. (1992) Transformational Properties of Integral Transforms of Images. Journal of the Optical Society of America:A, 494-496.
- 86 Zetsche, C. & Caelli, T. (1989). Invariant Pattern Recognition Using Multiple Filter Image Representations. Computer Vision, Graphics and Image Processing 45,251-262.
- 85 Wu, J., Rink, R., Caelli, T. & Gourishankar, V. G. (1989). Recovery of the 3-D Location and Motion of a rigid Object through Camera Image (Extended Kalman filter approach). International Journal of Computer Vision, 2, 4, 373-394.
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- 83 Ferraro, A. & Caelli, T. (1988). The relationship between integral transform invariances and Lie Group Theory. Journal of the Optical Society of America A:Optics and Image Science,5, 738-742.
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- 81 Liu, Z.-Q., Gourishankar, V., & Caelli, T. (1988). An adaptive iterative algorithm for image restoration. Image and Vision Computing, 6, 3, 151-160.
- 80 Rentschler, I., Hubner, M. & Caelli, T. (1988). On the discrimination of compound Gabor signals and textures. Vision Research, 28(2), 279-291.
- 79 Caelli, T. (1988). An adaptive computational model for texture segmentation. IEEE Transactions on Systems, Man and Cybernetics, 18, 1, 9-17.
- 78 Caelli, T., & Nawrot, M. (1988). On the localization of signals in images. Journal of the Optical Society of America A: Optics and Image Science, 4(12), 2274-2280.
- 77 Caelli, T. & Oguztoreli, M.N. (1988). Some task and signal dependent rules for spatial vision. Spatial Vision, 2, 4, 295-315.
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- 71 Ogustoreli, M. N., Steil, G., and Caelli, T., M. (1988). Underlying Neural Computations for Some Visual
Phenomena. Biological Cybernetics, 60, 89-106.
- 70 Oguztoreli, M.N., Steil, G.M. & Caelli, T. (1987). On the identification of neural responses. Biological
Cybernetics, 56, 97-106.
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mask? Vision Research, 27(8), 1319-1326.
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Computer Vision, Graphics, and Image Processing, 39, 131-143.
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adaptive filtering. Biological Cybernetics, 57, 233-240.
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perception. Behavioral Research Methods, Instruments, & Computers, 18(6), 493-506.
- 63 Caelli, T., Hubner, M. & Rentschler, I. (1986). On the discrimination of micropatterns and textures. Human
Neurobiology, 5(2), 129-136.
- 62 Caelli, T. & Moraglia, G. (1986). On the detection of signals embedded in natural scenes. Perception and
Psychophysics, 39(2), 87-95.
- 61 Caelli, T. & Rentschler, I. (1986). A cross-correlation model for pattern acuity. Journal of the Optical
Society of America A, 3(11), 1948-1956.
- 60 Caelli, T. & Yuzyk, J. (1986). On the extraction and alignment of image edges. Spatial Vision, 1(3),
205-217.
- 59 Liu, Z.-Q. & Caelli, T. (1986). Adaptive post-filter matching technique for detecting signals in non-white
noise. Applied Optics, 25, 1622-1626.
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functional structure of complex retinal neural networks. Biological Cybernetics, 53, 229-238.
- 57 Oguztoreli, M.N. & Caelli, T. (1986). An inverse problem in neural processing. Biological Cybernetics, 53,
239-245.
- 56 Oguztoreli, M.N., Steil, G.M. & Caelli, T. (1986) Control mechanisms of a neural network. Biological
Cybernetics, 54, 21-28.
- 55 Caelli, T. (1985). Artificial intelligence and brain function. Human Neurobiology, 4, 199.
- 54 Caelli, T. (1985). Three processing characteristics of visual texture segmentation. Spatial Vision, 1(1),
19-30.
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Perception and Psychophysics, 37, 536-542.
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Vision Research, 25(5), 671-684.
- 51 Caelli, T., Steil, G., & Oguztoreli, M.N. (1985). Control properties of perceptual transient and sustained
mechanisms. Biological Cybernetics, 52, 177-186.
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determinants. Quarterly Journal of Experimental Psychology, 37(a), 1-23.
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Sensitivity to spatial distortion. Experimental Brain Research, 60, 279-288.
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21-31.
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