

**PUBLICATIONS**

K.N.R.Mohana Rao, A. G. Dempster, Bill Jarra and Shahid Khan, "Automatic scanning of Malaria infected blood slide images using Mathematical Morphology", *IEE seminar on Medical applications of Signal Processing*, pp 12/1-12/6, October 2002, London

Demirsoy S. S., A. Dempster and I. Kale, "Power Consumption Behaviour of Multiplier Block Algorithms", *Proc MWSCAS 2002*, Tulsa, Aug 2002, pages not yet allocated

K N R Mohana Rao and A G Dempster, "Use of Area-Closing to Improve Granulometry Performance", *Proc VIPromCom-2002, Zadar, Croatia*, June 16-19 2002, pp 295 - 301

K N R Mohana Rao and A G Dempster, "Modification on Distance Transform to Avoid Over-Segmentation and Under-Segmentation", *Proc VIPromCom-2002, Zadar, Croatia*, June 16-19 2002, pp 295 - 301

Gustafsson, Oscar, Andrew G Dempster and Lars Wanhammer, "Extended Results for Minimum-Adder Constant Integer Multipliers", *Proc ISCAS 2002*, Phoenix, May 27 – 29 2002, pp173-76

Demirsoy S. S., A. Dempster and I. Kale, "Power Analysis of Multiplier Blocks", *Proc ISCAS 2002*, Phoenix, May 27 – 29 2002, pp1297-300

Dempster, A, S S Demirsoy and I. Kale, "Designing Multiplier Blocks with Low Logic Depth", *Proc ISCAS 2002*, Phoenix, May 27 – 29 2002, ppV773-776

di Ruberto, Cecilia, Andrew Dempster, Shahid Khan, Bill Jarra, "Analysis of infected blood cell images using morphological operators", *Image and Vision Computing*, vol 20 no 2, Feb 2002 pp133-146

Di Ruberto, C.; and A Dempster, "Attributed skeleton graphs using mathematical morphology", *Electronics Letters*, vol 37, no 22, 25 Oct 2001, pp 1325-1327

Beck R, Dempster A G, Kale I, "Finite-Precision Goertzel Filters Used for Signal Tone Detection", *IEEE Trans Circuits and Systems II*, July 2001, pp691-700

K N R Mohana Rao and A G Dempster, "Area-granulometry: an improved estimator of size distribution of image objects", *Electronics Letters*, vol 37, no 15, 19 July 2001, pp 950-951

Demirsoy S. S., R. Beck, A. Dempster and I. Kale, "Novel recursive DCT implementations: A comparative study", *IEEE Int. Conf. on Intelligent Data Acquisition and Advanced Computing Systems (IDAACS'2001)*, pp. 120-123, Ukraine, July 2001

di Ruberto, Cecilia, Andrew Dempster, Shahid Khan, Bill Jarra, "Morphological Image Processing for Evaluating Malaria Disease", *4<sup>th</sup> International Workshop on Visual Form*, Capri, May 2001, pp739-748

Dempster, A G and C di Ruberto, "Using Granulometries in Processing Images of Malarial Blood", *Proc ISCAS 2001*, Sydney, May 6-9 2001, ppV291-294

Bartlett, V A and A G Dempster, "Using Carry-Save Adders in Low-Power Multiplier Blocks", *Proc ISCAS 2001*, Sydney, May 6-9 2001, pp IV222-225

Dempster, A G and V. A. Bartlett, "Transition Reduction in Multiplier-block based Digital Filters", *IEE Low Power IC Design Seminar*, 19 Jan 2001, pp 14/1-6

Dempster, A G and N P Murphy, "The Binomial Window: Heuristics and Metrics", *Signal Processing*, vol 80 no 12, Dec 2000, pp2641-2645

Demirsoy, S. S., A. G. Dempster and I. Kale, "Transition analysis in multiplier-block based FIR filter structures", *IEEE International Conference on Electronic Circuits and Systems (ICECS 2000)*, Kaslik, Lebanon, Dec 2000

Dempster A G, "Graphical Design Techniques for Fixed-Point Multiplication", *VLSI Design*, vol 11, no4, pp 363-379, Oct 2000

Di Ruberto, C.; and A Dempster, "Circularity measures based on mathematical morphology", *Electronics Letters*, vol 36, no 20, 28 Sept 2000, pp 1691 -1693

di Ruberto, Cecilia, Andrew Dempster, Shahid Khan, Bill Jarra, "Automatic Thresholding of Infected Blood Images using Granulometry and Regional Extrema" *15<sup>th</sup> International Conference of Pattern Recognition (ICPR'2000)*, Barcelona, Spain, Sept 3-8 2000, pp 445-448

di Ruberto, Cecilia, Andrew Dempster, Shahid Khan, Bill Jarra, "Segmentation of Blood Images Using Morphological Operators" *15<sup>th</sup> International Conference of Pattern Recognition (ICPR'2000)*, Barcelona, Spain, Sept 3-8 2000, pp 401-404

Dempster A G and N P Murphy, "Efficient Filter Banks and Interpolators", *Proc. 4<sup>th</sup> World Multiconference on Circuits, Systems, Communications and Computers (CSCC 2000)*, book 2, pp.1 - 6, Athens, July 2000

Beck R, Dempster A G, Kale I, "Characterisation of finite-precision resonators used in recursive filter DFT implementations", *Signal Processing*, vol.80, no.1, pp.161-183 2000

Dempster, A G and N P Murphy, "Efficient Interpolators and Filter Banks using Multiplier Blocks", *IEEE Trans Signal Processing*, vol 48 no 1, pp 257-261, Jan 2000

Dempster, Andrew, "The Hit-or-Miss Transform - a Morphological Image Correlation", *Proc Matlab DSP Conference 1999*, pp 78-81, November 1999.

di Ruberto, C and A G Dempster, "Morphological Processing of Malarial Slide Images", *Proc Matlab DSP Conference 1999*, pp 82-90, November 1999.

Dempster, A G and M D Macleod, "Graphical Methods for efficient Multiplier Design 1: Theory and Algorithms", invited paper, *Proc European Conference on Circuit Theory and Design (ECCTD99)*, vol 1, pp 257-260, September 1999.

Dempster, A G and M D Macleod, "Graphical Methods for efficient Multiplier Design 2: Applications to Digital Filters", invited paper, *Proc European Conference on Circuit Theory and Design (ECCTD99)*, vol 1, pp 261-264, September 1999.

- Dempster, A G and N P Murphy, "Lagrange Interpolator Filters and Binomial Windows", *Signal Processing*, vol. 76, no. 1, pp. 81-91, July 1999
- Dempster, A G and M D Macleod, "IIR Digital Filter Design Using Minimum- Adder Multiplier Blocks", *IEEE Trans Circuits & Systems II - Digital & Analog Signal Processing*, vol. 45, no. 6, pp. 761-763, June 1998.
- Dempster, A G and M D Macleod, "Comments on 'Minimum Number of Adders for Implementing a Multiplier and Its Application to the Design of Multiplierless Digital Filters'", *IEEE Trans Circuits & Systems II - Digital & Analog Signal Processing*, vol. 45, no. 2, pp. 242-243, February 1998.
- Dempster, A G and M D Macleod, "Comparison of Fixed-Point FIR Digital Filter Design Techniques", *IEEE Trans Circuits & Systems II - Digital & Analog Signal Processing*, vol. 44, no. 7, pp. 591-593, July 1997.
- Dempster, A G, "The Cost of Limit-Cycle Elimination in IIR Digital Filters Using Multiplier Blocks", *Proc International Symposium on Circuits and Systems (ISCAS97)*, vol 4, pp 2204-2207, June 1997
- Dempster, A.G. and M D Macleod, "Variable Wordlengths in Filters with Least-Squares Error Criterion", *Electronics Letters*, vol 33, no 3, pp201-202, January 1997
- Dempster, A.G., "Reducing complexity by increasing order of IIR digital filters", *Proc. 3<sup>rd</sup> IEEE Int. Conf. on Electronics, Circuits and Systems, (ICECS 96)*, vol. 1, pp. 522-525, Greece, 13-18 October 1996.
- Dempster, A.G. and M.D. Macleod, "Variable statistical wordlength in digital filters", *IEE Proceedings - Vision, Image & Signal Processing*, vol. 143, no. 1, pp. 62-66, February 1996.
- Dempster, A.G. and M.D. Macleod, "General algorithms for reduced-adder integer multiplier design", *Electronics Letters.*, vol. 31, no. 21, pp. 1800-1802, 12 October 1995.
- Dempster, A.G. and M.D. Macleod, "Use of minimum-adder multiplier blocks in FIR digital filters", *IEEE Trans Circuits & Systems II - Digital & Analog Signal Processing*, vol. 42(8), no. 9, pp. 569-577, September 1995.
- Dempster, A.G. and M.D. Macleod, "Variation of FIR complexity with order", *Proc. 38th Midwest Symposium on Circuits and Systems, (MWSCAS)*, vol. 1, pp. 342-345, Rio de Janeiro, 13-16 August 1995. Also Myril B Reed Outstanding Paper Award.
- Dempster, A.G., "Digital filter design for low-complexity implementation", PhD Thesis, University of Cambridge, 30 June 1995.
- Dempster, A.G. and M.D. Macleod, "Comparison of IIR filter structure complexities using multiplier blocks", *Proc. ISCAS 95*, pp. II/858-861, Seattle, 30 April - 3 May 1995.
- Dempster, A.G. and M.D. Macleod, "Constant integer multiplication using minimum adders", *IEE Proceedings - Circuits, Devices & Systems*, 141(5):407-413, October 1994.
- Dempster, A.G. and M.D. Macleod, "Multiplier blocks and the complexity of IIR structures", *Electronics Letters*, vol. 30, no. 22, pp. 1841-1842, 27 October 1994.

## Andrew Dempster

Dempster, A.G. and M.D. Macleod, "Use of multiplier blocks to reduce filter complexity", Proc. IEEE Int. Symp. on Circuits and Systems (ISCAS '94), vol. 4, pp. 263-266, London, 30 May - 2 June 1994.

Dempster, A.G. and M. D. Macleod, "Multiplication by an integer using minimum adders", IEE Colloquium on mathematical aspects of signal processing, Digest no. 1994/034, pp. 11/1-11/4, 10 February 1994.

Dempster, A.G., R.C. Bryant, H. Tagaris, S. L. Dougan, "GPS Receiver", Patent granted Australia 639308, May 25, 1993. USA 08/050,306, UK 9308510.8. Applications pending: Brazil P9107120, Russian Federation 93032317.09, Europe 91916233.9, Canada 2,096,019, Japan 515540/91, South Korea 701415/93.

Dempster, A.G. and R. C. Bryant, "Phase-Coherent Open-Loop GPS Receiver Concept", International Symposium on Signal Processing and Applications, Gold Coast, 1990, IE (Aust) and IEEE

Bryant, R.C., A.G. Dempster and S. L. Dougan, "An Open-Loop GPS Receiver Concept", Fifth Australian National Space Symposium, Canberra, 1989, IE (Aust)

Bundy, D.N. and A.G. Dempster, "The Lyman Spacecraft Bus and Australian Industry", Fourth Australian National Space Symposium, Adelaide, 1988, IE (Aust)