

Publication List of R (Chandra) Chandrasekhar

Refereed Journal Papers

1. S M Kwok, R Chandrasekhar, Y Attikiouzel, and M T Rickard. Automatic pectoral muscle segmentation on mediolateral oblique view mammograms. *IEEE Transactions on Medical Imaging*, 23(9):1129–1140, September 2004.
2. P C Houlis, R Chandrasekhar, and Y Attikiouzel. Norm selection and optimization for new range-based edge detector. *WSEAS Transactions on Circuits*, 1(1):137–142, 2002.
3. R Chandrasekhar and Y Attikiouzel. Unconventional edge detector. *Electronics Letters*, 37(2):79–80, January 2001.
4. R Chandrasekhar and Y Attikiouzel. New range-based neighbourhood operator for extracting edge and texture information from mammograms for subsequent image segmentation and analysis. *IEE Proceedings—Science, Measurement and Technology*, 147(6):408–413, November 2000.
5. R Chandrasekhar and Y Attikiouzel. Segmenting the Breast Border and Nipple on Mammograms. *Australian Journal of Intelligent Information Processing Systems*, 6(1):24–29, 2000.
6. J C Bezdek, R Chandrasekhar, and Y Attikiouzel. A Geometric Approach to Edge Detection. *IEEE Transactions on Fuzzy Systems*, 6(1):52–75, February 1998.
7. R Chandrasekhar and Y Attikiouzel. A Simple Method for Automatically Locating the Nipple on Mammograms. *IEEE Transactions on Medical Imaging*, 16(5):483–494, October 1997.

Invited Book Chapters

1. R Chandrasekhar and S M Kwok. Automatic assessment of mammogram adequacy and quality. In Jasjit S Suri and Rangaraj M Rangayyan, editors, *Recent Advances in Breast Imaging, Mammography, and Computer-Aided Diagnosis of Breast Cancer*, chapter 25, pages 833–846. SPIE Press, Bellingham, WA, USA, 2006.
2. R Chandrasekhar and Y Attikiouzel. A simple method for automatically locating the nipple on mammograms. In Jasjit S Suri and Rangaraj M Rangayyan, editors, *Recent Advances in Breast Imaging, Mammography, and Computer-Aided Diagnosis of Breast Cancer*, chapter 20, pages 701–722. SPIE Press, Bellingham, WA, USA, 2006.
3. S M Kwok, R Chandrasekhar, Y Attikiouzel, and M T Rickard. Automatic pectoral muscle segmentation on mediolateral oblique view mammograms. In Jasjit S Suri and Rangaraj M Rangayyan, editors, *Recent Advances in Breast Imaging, Mammography, and Computer-Aided Diagnosis of Breast Cancer*, chapter 18, pages 613–638. SPIE Press, Bellingham, WA, USA, 2006.
4. J S Suri, R Chandrasekhar, N Lanconelli, R Campanini, et al. The current status and likely future of breast imaging CAD. In Jasjit S Suri and Rangaraj M Rangayyan, editors, *Recent Advances in Breast Imaging, Mammography, and Computer-Aided Diagnosis of Breast Cancer*, chapter 28, pages 901–961. SPIE Press, Bellingham, WA, USA, 2006.

Refereed Conference Papers

1. T Fujita, R Chandrasekhar, B Singh, and K E Finucane. Semi-automatic tracking of the diaphragm contour in X-ray image sequences: Preliminary results. In Brian C Lovell, Anthony J Maeder, Sébastien Ourselin, and Terry Caelli, editors, *Digital Imaging Computing: Techniques and Applications (DICTA 2005) Proceedings*, pages 330–336, Cairns, Australia, 2005. IEEE. 06–08 December 2005, Cairns, Australia, CD-ROM Proceedings, Product Number E2467, DOI 10.1109/DICTA.2005.1578146.
2. S M Kwok, R Chandrasekhar, and Y Attikiouzel. Automatic assessment of mammographic positioning on the mediolateral oblique view. In *ICIP-2004, IEEE International Conference on Image Processing, 24–27 October, 2004*, volume 1, pages 151–154, Singapore, 2004. IEEE.
3. S M Kwok, R Chandrasekhar, and Y Attikiouzel. A mammogram-attribute database in XML format for data-driven segmentation and image analysis. In *IFMBE Proceedings: World Congress on Medical Physics and Biomedical Engineering (WC2003)*, volume 4, Sydney, Australia, August 2003. IFMBE and IOMP. 4 pages, ISSN: 1727-1983.
4. K Shen, R Chandrasekhar, Y Attikiouzel, B Singh, and K E Finucane. Analysis of digitized lateral fluoroscopy images to quantify the volume displaced by the diaphragm. In *24th Annual Conference of the IEEE Engineering in Medicine and Biology Society: Proceedings of the Second Joint EMBS/BMES Conference, 2002*, volume 2, pages 1047–1048, Houston, TX, USA, October 2002. IEEE.
5. P C Houlis, R Chandrasekhar, and Y Attikiouzel. Norm selection and optimization for new range-based edge detector. In *CDROM Proceedings of the 6th WSEAS International Multiconference CSCC, July 7–14, 2002, Rethymno, Crete, Greece*, pages 8321–8326 (CDROM Paper No. 832), Rethymno, Crete, Greece, July 2002. WSEAS.
6. S M Kwok, R Chandrasekhar, and Y Attikiouzel. Adaptation of the Daugman-Downing texture demodulation to highlight circumscribed mass lesions on mammograms. In A N Skodras and A G Constantinides, editors, *DSP 2002: Proceedings of the 14th International Conference on Digital Signal Processing, July 1–3, 2002, Santorini, Greece*, volume 1, pages 449–452, Santorini, Greece, July 2002. IEEE.
7. R Chandrasekhar, P Houlis, and Y Attikiouzel. Unconventional edge detector: Preliminary theoretical investigation. In A N Skodras and A G Constantinides, editors, *DSP 2002: Proceedings of the 14th International Conference on Digital Signal Processing, July 1–3, 2002, Santorini, Greece*, volume 1, pages 457–460, Santorini, Greece, July 2002. IEEE.
8. R Chandrasekhar, S M Kwok, and Y Attikiouzel. Automatic evaluation of mammographic adequacy and quality on the mediolateral oblique view. In Heinz-Otto Peitgen, editor, *Digital Mammography: IWDM 2002: 6th International Workshop on Digital Mammography*, pages 182–186. Springer-Verlag, Heidelberg, Germany, 2003. Proceedings of the Workshop, June 22–25, 2002, Bremen, Germany.
9. M Masek, R Chandrasekhar, C J S deSilva, and Y Attikiouzel. Spatially based application of the minimum cross-entropy thresholding algorithm to segment the pectoral muscle in mammograms. In *ANZIIS 2001: Proceedings of the Seventh Australian and New Zealand Intelligent Information Systems Conference*, pages 101–106, Perth, Australia, November 2001. ARCME, The University of Western Australia.
10. S M Kwok, R Chandrasekhar, and Y Attikiouzel. Automatic pectoral muscle segmentation on mammograms by straight line estimation and cliff detection. In *ANZIIS 2001: Proceedings of the*

- Seventh Australian and New Zealand Intelligent Information Systems Conference*, pages 67–72, Perth, Australia, November 2001. ARCME, The University of Western Australia.
11. R Chandrasekhar and Y Attikiouzel. Mammogram-attribute database: A tool for mammogram segmentation and analysis. In M H Hamza, editor, *Proceedings of the IASTED International Conference: Signal Processing, Pattern Recognition, and Applications (SPPRA)*, July 3–6, 2001, Rhodes, Greece, pages 143–148, Calgary, Canada, 2001. ACTA Press.
 12. R Chandrasekhar and Y Attikiouzel. An expert system schema for lesion search and detection on digitized mammograms. In George M Papadourakis, editor, *NNESMED 2001: Proceedings of the Fourth International Conference on Neural Networks and Expert Systems in Medicine and Healthcare*, pages 158–162. Technological Educational Institute of Crete, Crete, Greece, 2001.
 13. R Chandrasekhar and Y Attikiouzel. Segmentation of the pectoral muscle edge on mammograms by tunable parametric edge detection. In G Antoniou, N Mastorakis, and O Panfilov, editors, *Advances in Signal Processing and Computer Technologies*, pages 55–60. World Scientific and Engineering Society WSES Press, Athens, Greece, 2001.
 14. R Chandrasekhar and Y Attikiouzel. A new range-based image texture measure with application to mammogram image analysis. In *Advances in Medical Signal and Information Processing, IEE Conference Publication No. 476*, pages 129–133. Institution of Electrical Engineers, London, UK, 2000. First International Conference on Advances in Medical Signal and Information Processing, 4–6 September 2000, Bristol, UK.
 15. R Chandrasekhar and Y Attikiouzel. Automatic breast border segmentation by background modeling and subtraction. In Martin J Yaffe, editor, *IWDM 2000: 5th International Workshop on Digital Mammography*, pages 560–565. Medical Physics Publishing, Madison, WI, USA, 2001. Proceedings of the Workshop, June 11–14, 2000, Toronto, Canada.
 16. R Chandrasekhar and Y Attikiouzel. Acquisition of mammogram breast border reference data from non-experts. In *BMES & EMBS: First Joint Meeting of BMES & EMBS and 21st Annual International Conference of the IEEE Engineering in Medicine and Biology Society, October 13–16, 1999, Atlanta, GA, USA*, page 1141, 1999.
 17. R Chandrasekhar and Y Attikiouzel. A graphical interface for viewing mammograms interactively. In *BMES & EMBS: First Joint Meeting of BMES & EMBS and 21st Annual International Conference of the IEEE Engineering in Medicine and Biology Society, October 13–16, 1999, Atlanta, GA, USA*, page 1033, 1999.
 18. R Chandrasekhar and Y Attikiouzel. A new edge detector based on the extended Russ operator and its application to mammogram segmentation. In Nikos E Mastorakis, editor, *Recent Advances in Signal Processing and Communications*, pages 190–193. World Scientific and Engineering Society Press, Athens, Greece, 1999.
 19. R Chandrasekhar and Y Attikiouzel. The Need to Standardize and Calibrate Databases of Digitized Mammograms. In Nico Karssemeijer, Martin Thijssen, Jan Hendriks, and Leon van Erning, editors, *Digital Mammography: Nijmegen, 1998*, volume 13 of *Computational Imaging and Vision*, pages 503–504. Kluwer Academic Publishers, Dordrecht, The Netherlands, 1998. Fourth International Workshop on Digital Mammography, June 7–10, 1998, Nijmegen, The Netherlands.
 20. R Chandrasekhar, Y Attikiouzel, and C J S deSilva. Texture Analysis of Mammograms Using the Two-Dimensional Hurst Operator. In *DSP 97: Proceedings of the 13th International Conference on Digital Signal Processing, IEEE Signal Processing Society, July 2–4, 1997, Santorini, Greece*, volume 1, pages 97–100, Santorini, Greece, July 1997. IEEE.

21. R Chandrasekhar and Y Attikiouzel. Gross Segmentation of Mammograms using a Polynomial Model. In *Bridging Disciplines for Biomedicine: Proceedings of the 18th Annual International Conference, IEEE Engineering in Medicine and Biology Society, October 31–November 3, 1996, Amsterdam, The Netherlands*, pages 1056–1058. IEEE, Amsterdam, The Netherlands, October 1997.
22. J C Bezdek, R Chandrasekhar, and Y Attikiouzel. A New Fuzzy Model for Edge Detection. In B. Bosacchi and J. Bezdek, editors, *Applications of Fuzzy Logic Technology III*, volume 2761 of *SPIE Proceedings*, pages 11–28, Bellingham, WA, USA, 1996. SPIE.

Invited Plenary Lectures

1. Y Attikiouzel and R Chandrasekhar. DSP in mammography. In A N Skodras and A G Constantinides, editors, *DSP 2002: Proceedings of the 14th International Conference on Digital Signal Processing, July 1–3, 2002, Santorini, Greece*, volume 1, pages 29–34, Santorini, Greece, July 2002. IEEE. Invited Plenary Lecture.
2. Y Attikiouzel and R Chandrasekhar. Systematic hierarchical segmentation of mammograms. Invited Plenary Lecture, 6th WSEAS International Multiconference on Circuits, Systems, Communications and Computers (CSCC), July 7–14, 2002, Rethymno, Crete, Greece, 2002.

Theses

1. R Chandrasekhar. *Modem Phase Jitter Testing*. Honours Thesis, Department of Electrical and Electronic Engineering, The University of Western Australia, Nedlands, WA 6009, Australia, October 1975.
2. R Chandrasekhar. *The Development of a Quality Control Instrument for Gamma Cameras*. Master of Applied Science Thesis, Institute of Biomedical Engineering and Department of Electrical Engineering, University of Toronto, Toronto, Ontario, Canada, M5S 3G9, May 1982.
3. R Chandrasekhar. *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.

Pre-PhD Publications

1. R Chandrasekhar. The Construction of a Whole Body Plethysmograph. In *Second Symposium on Biomedical Engineering*, pages Paper No. B–1, Singapore, March 1985. Faculty of Medicine and Faculty of Engineering, National University of Singapore.
2. R Chandrasekhar. A Discussion of High Frequency Output Measurements from Electrosurgical Units. In James C H Goh and P Balasubramaniam, editors, *Biomedical Engineering: An Interdisciplinary Research, Proceedings of the Third Symposium on Biomedical Engineering, Singapore, April 11–12, 1986*, pages 248–254, Singapore, April 1986. National University of Singapore.
3. Thim Wan Cheong, R Chandrasekhar, and Toon Piau Wong. The Development of a Low-cost Ventilator-disconnect Monitor. In James C H Goh and P Balasubramaniam, editors, *Biomedical Engineering: An Interdisciplinary Research, Proceedings of the Third Symposium on Biomedical Engineering, Singapore, April 11–12, 1986*, pages 341–342, Singapore, April 1986. National University of Singapore.

4. R Chandrasekhar, T W Cheong, and S T Lim. Measures of Performance in Clinical Engineering. In A Nather and J C H Goh, editors, *Proceedings of the Fifth International Conference on Biomedical Engineering, National University Hospital, Singapore, December 8–10, 1988*, pages 260–263, Singapore, April 1988. Faculty of Medicine and Faculty of Engineering, National University of Singapore.
5. R Chandrasekhar, T W Cheong, and S T Lim. Some Practical Considerations on the Purchase and Use of Surgical/Medical Lasers. In A Nather and J C H Goh, editors, *Proceedings of the Fifth International Conference on Biomedical Engineering, National University Hospital, Singapore, December 8–10, 1988*, page 286, Singapore, April 1988. Faculty of Medicine and Faculty of Engineering, National University of Singapore.
6. R Chandrasekhar. Safety of Laboratory Equipment: A Biomedical Engineering Perspective. In *Abstracts: Third Asean Conference in Medical Laboratory Technology, Singapore, July 16–20 1989*, page 58, Singapore, July 1989. Singapore Association for Medical Laboratory Sciences.
7. R Chandrasekhar. Safety of Laboratory Equipment: An Engineering Perspective. *Journal of Medical Laboratory Sciences*, 3(1):15–18, December 1989.
8. R Chandrasekhar. Assessing the Quality of Service Vendor Performance. Seminar on Quality Assurance: Institute of Science and Forensic Medicine, Singapore, May 1992.