Bibliography

- Abo-Zahhad, M. Sabah M. Ahmed and Ahmed Zakaria, ECG Signal Compression Technique Based on Discrete Wavelet Transform and QRS-Complex Estimation, Signal Processing An International Journal (SPIJ), Volume (4) : Issue (2) 160
- Mohammed M. Abo-Zahhad, Tarik K. Abdel-Hamid, Abdelfatah M. Mohamed, Compression of ECG Signals Based on DWT and Exploiting the Correlation between ECG Signal Samples, Int. J. Communications, Network and System Sciences, 2014, 7, 53-70
- Ahmed S M, Al-Shrouf A and Abo-Zahhad M, ECG data compression using optimal non-orthogonal wavelet transform Med. Eng. Phys. 22 3946, 2000.
- Addison, Paul S, Wavelet Transforms and the ECG: a review, Institute of Physics Publishing, Physiol. Meas. 26, 2005, R155-R199.
- Akhiezer, N.I. and Glazman, I.M., *Theory of linear operators in Hilbert space*, Frederick Ungar Publishing Company New York, 1966.
- Aldroubi, A. and Unser, M., Families of multiresolution and wavelet spaces with optimal properties, Numer. Func. Anal., vol.14, No. 5-6, pp. 417-446, 1993.
- Antoine, J. P. et al, *Two-dimensional wavelets and their relatives*, Barnes and Noble, 17 Feb. 2006.
- Argoul, F., Arneodo, A., Elezgaray, J., Grasseau, G., Murenzi, R., Wavelet transform of two-dimensional fractal aggregates, Phys. Lett. A, 135, pp. 327-336,1989.
- Bahrampour, A. R., Izadnia S, Vahedi M., A variational method for designing wavelets to match a specified signal, Signal Processing, 2008, 88(10): 24172424.

- Bahrampour, A. R., Mirzaee S M A., A variational method for designing adaptive bandlimited wavelets, Signal, Image and Video Processing, 2009, 3(4): 363374.
- Blanchett T, Kember G C and Fenton G A, KLT-based quality controlled compression of single-lead ECG IEEE Trans. Biomed. Eng. 45 9425, 1998.
- Bogess, Albert and Narcowich, Francis J., *A First Course in Wavelets with Fourier Analysis*, Prentice Hall, N.J., 2001.
- Bradie B, Wavelet packet-based compression of single lead ECG IEEE Trans. Biomed. Eng. 43 493501, 1996.
- Burrus, C.S., Gopinath, R.A. and Guo, H., Introduction to Wavelets and Wavelet Transforms: A Primer, Prentice Hall, New Jersey, 1998.
- Cardenas-Barrera J L and Lorenzo-Ginori J, Mean-shape vector quantizer for ECG signal compression IEEE Trans. Biomed. Eng. 46 6270, 1999.
- Calderon, A., Intermediate spaces and interpolation, the complex method, *Studia Mathematica*, 24, 113-190, 1964.
- Celasun, I., Sankur, B., Anarim, E., Caglar, H., Design Issues For Matched Wavelets, 7th Mediterranean Electrotechnical Conference, 12-14 Apr 1994, Proceedings., 84 -87 vol.1, 1994.
- Chapa, J.O. and Rao, M. R., Constructing MRAs from desired wavelet functions, Proc. IEEE, 28th Annual Asilomar Conference on Signals, Systems and Computers, 2, 1109-1113, 1994.
- Chapa, J.O. and Rao, M. R., Optimal matched wavelet construction and its application to image pattern recognition, *Proc. SPIE, Wavelet Applications II*, 2491, 1995.
- Chapa, J.O. and Rao, R. M., Algorithms for designing wavelets to match a specified signal, *IEEE Transactions On Signal Processing*, 48, 3395-3406, 2000.
- Chapa, J. O., Matched wavelet construction and its application to target detection, Ph.D. dissertation, Rochester Inst. Technol, Rochester, NY, August 1995.

- Chaturvedi, R. and Yadav, Y., Survey on compression techniques for ECG signals, *International Journal of Advanced Research in Computer and Communication Engineering*, 2, 3511-3513, 2013.
- Chen J, Itoh S and Hashimoto T, ECG data compression by using wavelet transform IEICE Trans. Inf. Syst. E76D 145461, 1993.
- Chen, S. and Donoho, D., Basic pursuit, *Proc. IEEE, 28th Annual Asilomar Conference* on Signals, Systems and Computers, 1, 41-44, 1994.
- Chen J and Itoh S, A wavelet transform-base ECG compression method guaranteeing desired signal quality IEEE Trans. Biomed. Eng. 45 14149, 1998.
- Chui, C. K., Introduction to Wavelets, Academic Press, Inc. ,1992.
- Cohen A., and Daubechies, I., Non separable bidimensional wavelet bases, *Rev. Mat. Iberoamericana*, 9, pp. 51-137, 1993.
- Crowe J A, Gibson N M, Woolfson M S and Somekh M G, Wavelet transform as a potential tool for ECG analysis and compression J. Biomed. Eng. 14 26872, 1992.
- Daubechies, I., Orthonormal bases of compactly supported wavelets. *Communications* on Pure and Applied Mathematics, 41, 909-996, 1988.
- Daubechies, I., The wavelet transform, time-frequency localization and signal analysis, *IEEE Transaction On Information Theory*, 36, 961-1005, 1990.
- Daubechies, I., *Ten lectures in Wavelets*, CBMS-NSF Regional Conf. Ser. in Appl. Math. 61, Society for Industrial and Applied Mathematics (SIAM), Philadelphia, PA 1992.
- Daubechies, I., Where do wavelets come from?- A personal point of view, *Proc. IEEE*, 84, 510-513, 1996.
- Dirac, P.A.M., *The Principles of Quantum Mechanics*, Oxford University Press, 1930, www.archive.org.
- Donoho, D.L., Johnstone, I. M., Adapting to unknown smoothness via wavelet shrinkageJ. American Statistical Association, vol. 90, pp. 1200-1224, 1995.

- Faiz, J. and Lotfifard, S., A Novel Wavelet Based Algorithm for Discrimination of Internal Faults from Magnetizing Inrush Current in Power Transforms, IEEE Transaction on Power Delivery, vol. 21, no. 4, October 2006.
- Fira, C. M. and Goras , L., An ECG Signals Compression Method and Its Validation Using NNs, IEEE TRANSACTIONS ON BIOMEDICAL ENGINEERING, VOL. 55, NO. 4, 13-19, APRIL 2008.
- Gomez-Morante, M., Nicoletti, D. W., A Wavelet-based Differential Transformer Protection, IEEE Transactions on Power Delivery, Vol. 14, No. 4, October 1999.
- Gopinath, R.A., Odegard, J.E. and Burrus, C.S., Optimal wavelet representation of signals and wavelet sampling theorem, *IEEE Transactions On Circuits and Systems II*, 41, 262-277, 1994.
- Grossmann, A. and Morlet, J., Decomposition of Hardy functions into square integrable wavelets of constant shape, *SIAM Journal on Mathematical Analysis*, 15, 723-736, 1984.
- On a new approach for estimating wavelet matched to signal, in: Proceedings of Eighth National Conference on Communications, IIT Bombay, 2002, pp. 180-184.
- Gupta, A., Joshi, S. D. and Prasad, S., A new method of estimating compactly supported wavelet with desired support and vanishing moments from a given signal, in: Proceedings of IASTED Conference SPPRA-2003, Greece, 2003, pp. 119-124.
- Gupta, A., Joshi, S. D. and Prasad, S., A new method of estimating infinitely supported wavelet from a given signal, in: Proceedings of IASTED Conference SPPRA-2003, Greece, 2003, pp. 125-129.
- Gupta, A., Joshi, S. D. and Prasad, S., A New Approach for Estimation of Statistically Matched Wavelet, IEEE TRANSACTIONS ON SIGNAL PROCESSING, VOL. 53, NO. 5, MAY 2005.
- Gupta, A., Joshi, S. D. and Prasad, S., A new method of estimating wavelet with desired features from a given signal, Signal Processing 85 (2005) 147-161.

- Michel Habib, Miguel A. Marin, A Comparative Analysis of digital Relaying Algorithms for the Differential Protection of Three Phase Transformers, IEEE Transactions on Power Systems, Vol. 3, No. 3, August 1988.
- Halmos, P. R., A Hilbert Space Problem Book, D. Van Nostrand Co., Inc., Princeton, N.J.-Toronto, Ont.-London, 1967.
- Hilton, L., Wavelet and wavelet packet compression of electrocardiograms, *IEEE Transactions On Biomedical Engineering*, 44, 394-4020, 1997.
- Jalaleddine S, Hutchens C, Strattan R and Coberly W, ECG data compression techniquesa unified approach, IEEE Trans. Biomed. Eng. 37 32943, 1990..
- Keinert, Fritz, Wavelets and Multiwavelets, Chapman & Hall/CRC, 2003.
- Krim, Tucker, Mallat and Donoho, On De-noising and Best Signal Representation, IEEE Trans. on Information Theory, Vol. 45, No.7, Nov. 99.
- Kumar, A., Ranjeet, K. and Pandey, R.K., Beta wavelet based ECG signal compression using lossless encoding with modified thresholding, *Computer and Electrical Engineering*, 39, 130-140, 2013.
- Lin,C. E., Wei,J. B., Huang, C. L., Cheng,C. L., Huang, C. J., "Harmonics Analysis of Magnetizing inrush Current in Transformers Under No-load Condition", ICHPS-III, Nashville Ind., 1988.
- Littlewood, J. and Paley, R., Theorems on Fourier series and power series, *Proceeding in London Mathematical Soceity*, 42, 52-89, 1937.
- Lu Z, Kim D Y and Pearlman W A, Wavelet compression of ECG signals by the set partitioning in hierarchical trees algorithm, IEEE Trans. Biomed. Eng., 47, 84955, 2000.
- Mallat, S., A theory for multiresolution signal decomposition, IEEE Trans. Pattern Anal. Machine Intell., 11, pp. 674-693,1989.
- Mallat, S., A Wavelet Tour of Signal Processing, Second Eds., Academic Press, USA, 1999.

- Mallat, S.G. and Zhang, Z., Matching pursuit with time-frequency dictionaries, *IEEE Transactions On Signal Processing*, 41, 3397-3415, 1993.
- Mansour, M. F., Subspace Design of Compactly Supported Orthonormal Wavelets , J. Fourier Anal. Appl. 20:6690, (2014).
- Meyer, Y., Orthonormal Wavelets. In: Combes, J.M., Grossmann, A. and Tchamitchian, Ph. eds. Wavelets: Time-Frequency Methods and Phase Spaces. Second ed., Springer Verlag, New York, 21-37, 1989.
- Meyer, Yves, *Wavelet and Operators*, Cambridge Studies in Advanced Mathematics, vol.37, Cambridge University Press, Cambridge, 1992.
- Miaou S-G and Lin H-L, Quality driven gold washing adaptive vector quantization and its application to ECG data compression IEEE Trans. Biomed. Eng. 47 20918, 2000.
- Miaou S-G, Yen H-L and Lin C-L , Wavelet-based ECG compression using dynamic vector quantization with tree codevectors in single codebook IEEE Trans. Biomed. Eng. 49 67180, 2002.
- Miaou S-G and Lin C-L, A quality-on-demand algorithm for wavelet-based compression of electrocardiogram signals IEEE Trans. Biomed. Eng. 49 2339, 2002.
- Misiti, M., Misiti, Y. and Oppenheim, G., Wavelets and their applications. Herm'es Science, 2003.
- Misiti M, Misiti Y, Oppenheim G, Poggi J. Matlab wavelet tool box. The Math Works Inc.; 2000.
- Moody GB, Mark RG. The impact of the MIT-BIH Arrhythmia Database. IEEE Eng in Med and Biol 20(3):45-50 (May-June 2001). (PMID: 11446209)
- Moises, G.-M., Denise, W.N., A Wavelet-Based Di erential Transformer Protection, IEEE Transactions on Power Delivery, Vol. 14, No. 4, October 1999.
- Moravej, Z., Vishvakarma D. N., and Singh S. P. Digital filtering algorithms for the differential relaying of power transformer: an over view, Electric Machines and Power Systems, vol. 28, pp.485-500, 2000.

- Morlet, J. et al., Wave propagation and sampling theory, *Geophysics*, 47, 203-236, 1982.
- Murenzi, R., Wavelet transforms associated to the n- dimensional Euclidean group with dilations: signals in more than one dimension, in Wavelets, J. M. Combes, A. Grossmann, and Ph. Tchamitchian, eds . , Springer-Verlag, Berlin, pp. 239–246,1989.
- Oliveira, M. O. and Bretas, A. S., Application of Discrete Wavelet Transform for Differential Protection of Power Transformers, Discrete Wavelet Transforms - Biomedical Applications, Prof. Hannu Olkkonen (Ed.), ISBN: 978-953-307-654-6, InTech, (2011).
- Olkkonen, H., Application of Discrete Wavelet Transform for Differential Protection of Power Transformers. In: Oliveira, M.O. and Bretas, A.S. eds. *Discrete Wavelet Transforms-Biomedical Applications*, InTech, 349-366, 2011.
- Ozgonenel, O., Onbilgin, G., Kocaman, C., Wavelets and Its Applications of Power System Protection, Gazi University Technical Education Faculty, Journal of Politechnic, 17:2, P:75-88, 2004, ISSN: 1003:9709.
- Ozgonenel, O., Onbilgin, G., Kocaman, C., Transformer Protection Using the Wavelet Transform, Turk J Elec Engin, VOL.13, NO.1 2005.
- Pandey, J.N. and Upadhyay, S.K., The Continuous Wavelet Transform and the Window functions, *Proc. Amer. Math. Soc.*, 143(11), 2015, pp. 4759-4773.
- Pathak, R.S., The Wavelet Transform, Atlantic Press, World Scientific, 2009.
- Goldberger AL, Amaral LAN, Glass L, Hausdorff JM, Ivanov PCh, Mark RG, Mietus JE, Moody GB, Peng C-K, Stanley HE. PhysioBank, PhysioToolkit, and PhysioNet: Components of a New Research Resource for Complex Physiologic Signals. Circulation 101(23):e215-e220 [Circulation Electronic Pages; http://circ.ahajournals.org/cgi/content/full/101/23/e215]; 2000 (June 13).
- Postnikov, E. B., Loskutov, A. Y., Wavelet Analysis of Fine-Scale Structures in the Saturnian B and C Rings Using Data from the Cassini Spacecraft, *Journal of Experimental and Theoretical Physics*, 2007, Vol. 104, No. 3, pp. 417422.

- M. A. Rahman and R. Jayasurya, A state-of-art review of transformer protection algorithm, IEEE Transaction on Power Delivery, vol. 3, pp.534 544, April 1988.
- Rajoub, B.A., "An efficient coding algorithm for the compression of ECG signals using the wavelet transform", *IEEE Transactions On Biomedical Engineering*, 49, 355-362, 2002.
- Ranjeet, K., Kumar, A. and Pandey, R.K., ECG signal compression using different techniques, *Communications in Computer and Information Science*, 125, 231-241, 2011.
- Rao, R.M. and Bopardikar, A.S., Wavelet Transforms: Introduction to Theory and Applications, Pearson Education, South Asia, 1998.
- Salmanpour, A., Browna, L. J., Shoemaker, J. K., "Spike detection in human muscle sympathetic nerve activity using a matched wavelet approach", Journal of Neuroscience Methods, 193, 343-355, 2010.
- Shi, G., Ding, A. and Zhang, N., "Design of wavelet based on waveform matching and its application to signal compression", 48th Midwest Symposium on Circuits and Systems, IEEE, 1696-1699, Vol. 2, 2005.
- Soman, K.P., Ramachandran, K.I. and Resmi, N.G., Insight into Wavelets from Theory to Practice, PHI Learning Pvt. Ltd., New Delhi, 2010.
- Strang, Gilbert and Nguyen, Troung, *Wavelets and Filter Banks*, Wellesley-Cambridge Press, 1997.
- Sweldens, W., The lifting scheme: A custom design construction of biorthogonal wavelets, *Applied Computational Harmonic Analysis*, 3, 186-200, 1996.
- Szu, H., Sheng, Y. and Chen, J., "Wavelet transform as a bank of matched filters", *Applied Optics* 31, 3267-3277, 1992.
- Tewfik, A.H., Sinha, D. and Jorgensen, P., "On the optimal choice of a wavelet for signal representation", *IEEE Transaction of Information Theory*, 38, 747-765, 1992.
- Thakor N V, Sun Y-C, Rix H and Caminal P, Multiwave: a wavelet-based ECG data compression algorithm, IEICE Trans. Inf. Syst. E76D 14629, 1993.

- Treves, François, *Topological Vector Spaces, Distributions and Kernels*, Academic Press, New York, London, 1967.
- Vetterli, M., "Wavelets and Filter Banks: Theory and Design". IEEE Transactions on signal processing, Vol. 40, No. 9, pp 2207-2232, 1992.
- Vladimirov, V. S., *Generalized Functions in Mathematical Physics*, Mir Publishers, 1979, www.archive.org.
- Walter, G. G., Pointwise Convergence to Wavelet Expansions, J. Approx. Theory, 80(1), 108-118,1995.
- Walter, G. G. and Shen, X., *Wavelets and other orthogonal systems*, second edition, Chapman and Hall/CRC, 2009.
- Yansong Wang, Weiwei Wu, Qiang Zhu and Gongqi Shen (2011). Discrete Wavelet Transfom for Nonstationary Signal Processing, Discrete Wavelet Transforms -Theory and Applications, Dr. Juuso T. Olkkonen (Ed.), ISBN: 978-953-307-185-5, InTech, Available from: http://www.intechopen.com/books/discretewavelettransforms-theory-and-applications/discrete-wavelet-transfom-for-nonstationarysignal-processing.
- Yip, P. and Rao, K. R., Energy packing efficiency for the generalized discrete transforms IEEE Trans. Commun., vol. 26, pp. 1257-1262, 1978.
- Omar A. S. Youssef, A Wavelet-Based Technique for Discrimination Between Faults and Magnetizing Inrush Currents in Transformers, IEEE Transactions On Power Delivery, Vol. 18, No. 1, 2003.
- Zahhad, M.A., "ECG Signal Compression Using Discrete Wavelet Transform", In: Olkkonen, J.T. ed., Discrete Wavelet Transforms-Theory and Applications, InTech, 143-168, 2011.

List of Publications

- Pandey, J. N., Jha, N. K., and Singh, O. P., The Continuous Wavelet Transform in ndimensions, *International Journal of Wavelets, Multiresolution and Information Processing*, (Accepted on June 26, 2016).
- Jha, N.K., Roy,A.,Singh, D. and Mishra,R. K., A SYSTEM AND METHOD FOR INRUSH AND FAULT DETECTION FOR DIFFERENTIAL PROTECTION OF TRANSFORMER, (Patent filed), Patent application no. 2630/DEL/2015, August 25, 2015.