Bibliography

[1]   A. W. Lohmann and B. Wirnitzer, Triple correlations, Proc. IEEE, vol. 72, No 7, 1984, pp. 889–901.

[2]   C. L. Nikias and M. R. Raghuveer, Bispectral estimation: A digital signal processing framework, Proc. IEEE, vol. 75, No 7, July 1987, pp. 869–891.

[3]   J. M. Mendel, Tutorial on higher-order statistics (spectra) in signal processing and system theory: theoretical results and some applications, Proc. IEEE, vol. 79, No 3, March 1991, pp. 278–305.

[4]   C. L. Nikias and A. P. Petropulu, Higher Order Spectra Analysis: A Nonlinear Signal Processing Framework, PTR Prentice Hall, Englewood Cliffs, NJ, 1993.

[5]   I. Jouny, F. D. Garber and R. I. Moses, Radar target identification using the bispectrum: a comparative study, IEEE Trans. on Aerospace and Electronic Systems, vol. 31, No 1, pp. 69–77, 1995.

[6]   A. V. Totsky and B. F. Gorbunenko, Investigations of the synthetic aperture radar images formed by processing of bispectral data, International Journal of Electronics and Communications, (AEÜ), vol. 53, No 3, 1999, pp. 146–150.

[7]   I. Jouny, Description of radar targets using the bispectrum, Radar, Sonar and Navigation, IEE Proceedings, vol. 141, issue 3, pp. 159–163, June 1994.

[8]   A. V. Totsky, I. V. Kurbatov, V. V. Lukin, K. O. Egiazarian and J. T. Astola, Combined bispectrum-filtering techniques for radar output signal reconstruction in ATR applications, Proceedings of International Conference Automatic Target Recognition XIII; Firooz A. Sadjadi, ed.; Orlando (USA), April 2003, SPIE vol. 5094, pp. 301–312.

[9]   A. W. Lohmann, G. Weigelt and B. Wirnitzer, Speckle masking in astronomy: triple correlation theory and applications, Applied Optics, vol. 22, December 1983, pp. 4028–4037.

[10]   H. Bartelt, A. W. Lohman and B. Wirnitzer, Phase and amplitude recovery from bispectra, Applied Optics, vol. 23, September 1984, pp. 3121–3129.

[11]   T. Reinheimer, K.-H. Hofmann, M. Schöller and G. Weigelt, Speckle masking interferometry with Large Binocular Telescope, Astron. Astrophys. Suppl. Series, vol. 121, January 1997, pp. 191–199.

[12]   K. Sasaki, T. Sato and Y. Nakamura, Holographic passive sonar, IEEE Trans. Sonics Ultrasonics, SU-24, May 1977, pp. 193–200.

[13]   G. B. Giannakis and M. K. Tsatsanis, Signal detection and classification using matched filtering and higher order statistics, IEEE Trans. on Acoustics, Speech and Signal Processing, vol. 38, No 7, 1990, pp. 1284–1296.

[14]   A. Trucco, Detection of objects buried in the seafloor by a pattern-recognition approach, IEEE Journal of Oceanic Engineering, vol. 26, No 4, 2001, pp. 769–782.

[15]   M. Nakamura, Waveform estimation from noisy signals with variable signal delay using bispectrum averaging, IEEE Trans. on Biomedical Engineering, vol. 40, No 2, February 1993, pp. 118–127.

[16]   Zhang Ji-Wu, Zheng Chong-Xun and Xie Au, Bispectrum analysis of focal ischemic cerebral EEG signal using third-order recursion method, IEE Trans. Biomedical Engineering, vol. 47, No 3, March 2000, pp. 352–359.

[17]   A. V. Tockij, J. Peřina and S. I. Zabuga, Super-resolution in incoherent systems of image restoration with noise by bispectral data processing, Optik, vol. 83, No 3, 1988, pp. 85–87.

[18]   G. Sundaramoorthy, M. R. Raghuveer and S. A. Dianat, Bispectral reconstruction of signals in noise: Amplitude reconstruction issues, IEEE Trans. Acoustics, Speech and Signal Processing, vol. 38, No 7, July 1990, pp. 1297–1306.

[19] S. A. Dianat and M. R. Raghuveer, Fast algorithms for phase and magnitude reconstruction from bispectra, Optical Engineering, vol. 29, No 5, May 1990, pp. 504–512.

[20] M. G. Kang, K. T. Lay and A. K. Katsaggelos, Phase estimation using the bispectrum and its application to image restoration, Optical Engineering, vol. 30, No 7, July 1991, pp. 976–985.

[21] A. Rivola and P. R. White, Use of higher order spectra monitoring: simulation and experiments, Proc. of the DETC99: 1999 ASME Design Engineering Technical Conferences, Las Vegas, Nevada, 12–15 September, 1999, http://s360.ing.unibo.it/appl_mec/rivola/publ6

[22] K.-Y. Jhang, Applications of nonlinear ultrasonics to the NDE of material degradation, IEEE Trans. on Ultrasonics, Ferroelectrics and frequency Control, vol. 47, No 3, pp. 540–548, 2000.

[23] M. R. Raghuveer and C. L. Nikias, Bispectrum estimation: a parametric approach, IEEE Trans. Acoustics, Speech and Signal Processing, vol. ASSP-33, pp. 1213–1230, October 1985.

[24] K. Sasaki, T. Sato and Y. Yamashita, Minimum bias windows for bispectral estimation, Journal of Sound and Vibrations, vol. 40, No 1, 1975, pp. 139–148.

[25] V. G. Alekseev, Non-parametric bispectrum analysis of stationary random processes, Uspekhi Sovremennoy Radioelectroniki, No 5, 2003, pp. 40–47 (in Russian).

[26] D. R. Brillinger, An introduction to polyspectra, Ann. Math. Statist., vol. 36, 1965, pp. 1351–1374.

[27] M. I. Skolnik, Introduction to radar systems (second edn.), McGraw-Hill, p. 581, 1980.

[28] A. V. Totsky, A. V. Popov, I. V. Kurbatov, V. V. Lukin, J. T. Astola and K. O. Egiazarian, Radar range-polarization profile estimation using bispectrum based reconstruction of naval object shape, Uspekhi sovremennoy radioelektroniki, Moscow, No 7, pp. 40–50, 2004.

[29] G. Sundaramoorthy, M. R. Raghuveer and S. A. Dianat, Bispectral reconstruction of signals in noise: Amplitude reconstruction issues, IEEE Trans. Acoustics, Speech and Signal Processing, vol. 38, No 7, pp. 1297–1306, July 1990.

[30] J. Astola, K. Egiazarian, V. V. Lukin, A. V. Totsky and A. A. Zelensky, Assessing bispectrum estimator performance for deterministic real-valued signals observed in additive Gaussian noise and random signal shift environment, Zarubezhnaya Radioelectronica, issue 1, No 1, 2006, pp. 51–59, (in Russian).

[31] S. M. Kay, Fundamentals of Statistical Signal Processing, Volume 1, Prentice Hall PTR, Upper Saddle River, New Jersey, 1993.

[32] A. V. Totsky, I. V. Kurbatov, V. V. Lukin, A. A. Zelensky, J. T. Astola and K. O. Egiazarian, Estimation of unknown signal shape by bispectrum-filtering techniques for Gaussian and non-Gaussian noise environments, Zarubezhnaya Radioelectronica, issue 1, No 1, pp. 43–54, 2005.

[33] Kravchenko V.F., Perez-Meana H.M. and Ponomaryov V. I. Adaptive Digital Processing of Multi-dimentional Signals with Applications. M.: Fizmatlit, 360 p., 2009.

[34] T. Matsuoka and T. J. Ulrich, Phase estimation using the bispectrum, Proc. IEEE, vol. 72, No 10, pp. 1403–1411, Oct. 1984.

[35] J. C. Marron, P. P. Sanchez and R. C. Sullivan, Unwrapping algorithm for least-squares phase recovery from the modulo 2π bispectrum phase, Journal of the Optical Society of America, vol. 7, No 1, January 1990, pp. 14–20.

[36] A. V. Totsky, P. Yu. Kostenko, J. T. Astola, K. O. Egiazarian and I. V. Kurbatov, Reduction of waveform distortions in bispectrum-based signal reconstruction systems, Telecommunications and Radio Engineering, vol. 61, No 7, 2004, pp. 591–599.

[37] J. T. Astola, K. O. Egiazarian, P. A. Molchanov and A. V. Totsky, Signal reconstruction by normalized bispectrum estimates in noise, Telecommunications and Radio Engineering, vol. 67, No 5, 2008, pp. 379–390.

[38] M. G. Kang, K. T. Lay and A. Katsaggelos, Phase estimation using the bispectrum and its application to image restoration, Optical Engineering, vol. 30, No 7, pp. 976–985, July 1991.

[39] A. P. Petropulu and C. L. Nikias, Signal reconstruction from the phase of the bispectrum, IEEE Transactions on Signal Processing, vol. 40, No 3, pp. 601–610, March 1992.

[40] S. Alshebeili and A. E. Cetin, A phase reconstruction algorithm from bispectrum, IEEE Transactions on Geoscience and Remote Sensing, vol. 28, No 2, pp. 166–170, March 1990.

[41] A. P. Petropulu and H. Pozidis, Phase reconstruction from bispectrum slices, IEEE Transactions on Signal Processing, vol. 46, No 2, pp. 527–530, February 1998.

[42] A. V. Totsky, O. V. Krylov, I. V. Kurbatov, V. V. Lukin, K. O. Egiazarian and J. Astola, Statistical investigations of bispectral signal and image restoration for Gaussian and non-Gaussian noise environment, Proceedings of International TICSP Workshop on Spectral Methods and Multirate Signal Processing SMMSP'2001, Pula, Croatia, June 16–18, 2001, pp. 231–241.

[43] A. V. Totsky, I. V. Kurbatov, V. V. Lukin, A. A. Zelensky, J. Astola and K. O. Egiazarian, Use of 2-D filtering of bispectrum estimations for 1-D signal reconstruction in mixed noise environment, Proceedings Second International Workshop on Spectral Methods and Multirate Signal Processing SMMSP'2002, Toulouse, France, September 7–8, 2002, pp. 171–178.

[44] V. Lukin, A. Totsky, A. Kurekin, I. Kurbatov, J. Astola and K. Egiazarian, Signal Waveform reconstruction from noisy bispectrum estimations pre-processed by vector filters, Proceedings of the Seventh International Symposium on Signal Processing and Applications, Paris (France), 2003, July, 1–4, vol. 2, pp. 169–172.

[45] A. V. Totsky, A. A. Roenko, V. V. Lukin, A. A. Zelensky, J. Astola and K. O. Egiazarian, Combined bispectrum-median reconstruction of 1-D signal waveform, Proceedings of the 2004 International TICSP Workshop on Spectral Methods and Multirate Signal Processing, SMMSP'2004, Vienna (Austria), September 2004, pp. 87–93.

[46] D. V. Fevralev, V. V. Lukin, A. V. Totsky, K. Egiazarian and J. Astola, Signal shape reconstruction by DCT-based filtering of Fourier spectrum recovered from bispectrum data, Proceedings of the 2005 International TICSP Workshop on Spectral Methods and Multirate Signal Processing, SMMSP'2005, Riga (Latvia), June 2005, pp. 87–93.

[47] V. Lukin, A. Totsky, D. Fevralev, A. Roenko, J. Astola and K. Egiazarian, Adaptive combined bispectrum-filtering signal processing in radar systems with low SNR, International Conference, ISCAS 2006, Proc. ISCAS, pp. 3690–3693.

[48] D. V. Fevralev, V. V. Lukin, A. V. Totsky, K. Egiazarian and J. Astola, Combined bispectrum-filtering technique for signal shape estimation with DCT-based adaptive filter, Proc. of International TICSP Workshop on Spectral Methods and Multirate Signal Processing SMMSP'2006, Florence, Italy, September 2–3, 2006, pp. 133–140.

[49] A. V. Totsky, D. V. Fevralev, V. V. Lukin, V. Ya. Katkovnik, D. V. Paliy, K. O. Egiazarian, O. B. Pogrebnyak and J. T. Astola, Performance study of adaptive filtering in bispectrum signal reconstruction, Circuits Systems and Signal Processing, 2006, vol. 25, No 3, pp. 314–342.

[50] Ya. D. Shirman, ed., Electronic systems: construction foundations and theory, Makvis, Moscow, pp. 153–179, pp. 668–688, 1998 (in Russian).

[51] M. I. Skolnik, Introduction to radar systems (second edn.), McGraw-Hill, p. 581, 1980.

[52] A. N. Dolia, V. V. Lukin and A. A. Zelensky, Low SNR time delay estimation by adaptive post-filtering of cross-correlator output sequence, Recent Advances in Information Science and Technology, World Scientific, Singapore, Nikos Mastorakis, ed., pp. 206–210, 1998.

[53] J. Astola and P. Kuosmanen, Fundamentals of Nonlinear Digital Filtering, CRC Press LLC, N. Y. Boca Raton, p. 276, 1997.

[54] L. S. Davis and A. Rosenfeld, Noise cleaning by iterated local averaging, IEEE Trans. Syst. Man Cybern., vol. SMC-8, pp. 705–710, September 1978.

[55] A. Papoulis, Probability & Statistics, Prentice-Hall International, Inc., 1990.

[56] P. E. Trahanias, D. Karakos and A. N. Venetsanopoulos, Directional processing of Color Images: Theory and Experimental Results, IEEE Transactions on Image Processing, vol. 5, pp. 868–880, June, 1996.

[57] A. A. Kurekin, V.V Lukin., A. A. Zelensky, J. Astola, K. Saarinen and P. Kuosmanen, Adaptive vector LQ-filters for color image processing, Proc. Conf. SPIE on Statistical and Stochastic Methods in Image Processing II. – San-Diego (California, USA), SPIE vol. 3167. pp. 46–56, August, 1997.

[58] D. L. Donoho and I. M. Johnstone, Adapting to unknown smoothness by wavelet shrinkage, Journal of American Statistical Association, 1995, vol. 90, No 11, pp. 1200–1224.

[59] R. Oktem, Transform Domain Algorithms for Image Compression and Denoising: Thesis for the degree of Doctor of Technology, Tampere University of Technology (Tampere, Finland), 2000, 142 p.

[60] A. Gotchev, Spline and Wavelet Based Techniques for Signal and Image Processing: Thesis for the degree of Doctor of Technology, Tampere University of Technology (Tampere, Finland), 2003. – 171 p.

[61] I. Djurovic, V. Lukin and A. Roenko, Removal of α-stable noise in frequency modulated signals using robust DFT forms, Telecommunications and Radioengenireenig, vol. 61, No 7, pp. 547–590, 2004.

[62] A. A. Roenko, V. V. Lukin and A. V. Totsky, Using of robust estimates for bispectrum-based signal processing, Radioelektronni i computerni systemy, Kharkov, Natsionalny Aerocosmichesky Universitet, 2004, v. 4 (8), pp. 5–13 (in Russian).

[63] K. Egiazarian, V.Melnik, V. Lukin and J. Astola, Local Transform Based Denoising for Radar Image Processing, Proceedings of IS&T/SPIE International Conference on Nonlinear Image Processing and Pattern Analysis XII, San Jose, USA, Jan. 2001, SPIE Vol. 4304, pp. 170–178.

[64] V. Lukin, V. Melnik, A. Pogrebniak, A. Zelensky, J. Astola and K. Saarinen, Digital adaptive robust algorithms for radar image filtering, Journal of Electronic Imaging, 1996, vol. 5(3), pp. 410–421.

[65] J.-S. Lee, Digital image smoothing and the sigma filter, Computer Vision, Graphics and Image Processing, 1983, vol. 24, pp. 255–269.

[66] V. Lukin, A. Zelensky, N. Tulyakova and V. Melnik, Adaptive method for 1-D signal processing based on nonlinear filter bank and Z-parameter, Proceedings of the IEEE-EURASIP Workshop on Nonlinear Signal and Image processing, Antalya (Turkey), vol. 1, pp. 287–291, June 1999.

[67] V. Katkovnik, A new method for varying adaptive bandwidth selection, IEEE Transactions of Signal Processing, vol. 47, No 9, pp. 2567–2571, 1999.

[68] V. Katkovnik, K. Egiazarian and J. Astola, Adaptive window size image de-noising based on intersection of confidence intervals (ICI) rule, J. of Math. Imaging and Vision, vol. 16, No 3, pp. 223–235, 2002.

[69] V. Katkovnik, K. Egiazarian and J. Astola, Application of the ICI principle to window size adaptive size median filtering, Signal Processing, vol. 83, No 2, pp. 251–257, 2003.

[70] A. Foi, V. Katkovnik, K. Egiazarian and J. Astola, Inverse halftoning based on the anisotropic LPA-ICI deconvolution, In: Astola J. et al. (eds). Proceedings of The 2004 International TICSP Workshop on Spectral Methods and Multirate Signal Processing, SMMSP 2004, Vienna, Austria, 11–12 September 2004, pp. 49–56, 2004.

[71] A. Goldenshluger and A. Nemirovski, On spatial adaptive estimation of nonparametric regression, Math. Meth. Statistics, vol. 6, pp. 135–170, 1997.

[72] L. Stanković, Performance analysis of the adaptive algorithm for bias-to-variance tradeoff, IEEE Trans. on Signal Proc., vol. 52, No 5, pp. 1228–1234, 2004.

[73] S. A. Dianat and M. R. Raghuveer, Fast algorithms for phase and magnitude reconstruction from bispectra, Optical Engineering, vol. 29, No 5, pp. 504–512, May, 1990.

[74] V. Chandran, B. Carswell, B. Boashash and S. L. Elgar, Pattern recognition using invariants defined from higher-order spectra 2-d image inputs, IEEE Trans. Image Processing, vol. 6, No 5, pp. 703–712, 1997.

[75] A. P. Petropulu and C. L. Nikias, Signal reconstruction from the phase of bispectrum, IEEE Trans. on Signal Processing, vol. 40, No 3, pp. 601–610, 1992.

[76] J. T. Astola, K. O. Egiazarian, I. V. Kurbatov and A. V. Totsky, Object recognition by bispectrum based image reconstruction in additive noise and line jitter environment, Proceedings of a Workshop on Computational Intelligence and Information Technologies, Niš, Yugoslavia, pp. 131–134, October 13, 2003.

[77] A. V. Totsky, J. T. Astola, K. O. Egiazarian, I. V. Kurbatov and V. V. Lukin, Bispectrum-based reconstruction technique by tapering pre-distortion of image rows, Proceedings of Seventh All-Ukrainian International Conference, October 11–15, 2004, Kyjiv, Ukraine, pp. 229–232.

[78] A. V. Totsky, J. T. Astola, K. O. Egiazarian, I. V. Kurbatov and A. A. Zelensky, Image reconstruction using the bispectrum and tapering pre-distortions of image rows, Zarubezhnaya Radio-electronica, issue 1, No 7, pp. 51–57, 2004.

[79] J. T. Astola, K. O. Egiazarian, I. V. Kurbatov, A. V. Totsky and A. A. Zelensky, Bispectrum based image reconstruction technique for jitter removal in additive Gaussian noise environment, Radioelectronica, issue 1, No 7, pp. 58–66, 2004.

[80] A. V. Totsky, Digital image reconstruction by using row-predistortion and third-order moment function estimation, Radioelektronni i computerni systemy, Kharkov, Natsionalny Aerocos-michesky Universitet, 2008, v. 1 (28), pp. 25–31 (in Russian).

[81] A. Kokaram, P. Rayner, P. van Roosmalen and J. Biemond, Line registration of jittered video, Proceedings of ICASSP-97, vol. 4, April 21–24, 1997, pp. 2553–2556.

[82] J. G. Proakis, Digital communications, second edn. New York: McGraw-Hill, 1989.

[83] Merrill I. Skolnik, Introduction to radar systems, third edn. Tata McGraw-Hill Company, Ltd, 2001.

[84] K. O. Egiazarian, V. V. Lukin, P. A. Molchanov, A. A. Roenko, A. V. Totsky and A. A. Zelensky, Signal detection in additive Gaussian noise, Doppler frequency shift and propagation fading fluctuations environment by using third-order test statistics, Tampere International Center for Signal Processing, Finland, TICSP Series No 47, Festschrift in Honor of Jaakko Astola on the Occasion of his 60th Birthday, Finland, Tampere University of Technology, 2009, pp. 320–343.

[85] P. A. Molchanov, J. T. Astola, K. O. Egiazarian, A. V. Totsky and A. A. Zelensky, A novel bispec-trum-based frequency encoding technique developed for noisy and multipath fading radio links, Telecommunications and Radio Engineering, OVl. 73, Issue 3, pp. 221–239, 2014.

[86] G. L. Morelia, A review of signal detection using the bispectrum with applications in under-water acoustics, Applied Research Laboratory, The Pennsylvania State University, Technical Report No. TR 94–03, 94 p, 1994.

[87] S. M. Kay, Fundamentals of Statistical Signal Processing, Volume II, Detection Theory. Prentice-Hall PTR, 595 p., 1998.

[88] J. G. Proakis, Digital communications, third edn. New York: McGraw-Hill, 1995.

[89] B. Skliar, Digital Communications: Fundamentals and Applications, Prentice Hall, 1996.

[90] Y. D. Shirman, S. A. Gorshkov, S. P. Leshenko and V. M. Orlenko, Aerial target backscattering simulation and study of radar recognition, detection and tracking. Proc. IEEE International Radar Conference, Alexandria, USA, pp. 521–526, May 2000.

[91] I. Jouny, F. D. Garber and R. I. Moses, Radar target identification using the bispectrum: a comparative study, IEEE Trans. on Aerospace and Electronic Systems, vol. 31, No 1, pp. 69–77, 1995.

[92] X. D. Zhang, Y. Shi and Z. Bao, A new feature vector using selected bispectra for signal classification with application in radar target recognition, IEEE Trans. on Signal Processing, vol. 49, No 9, pp. 1875–1885, 2001.

[93] B.Pei, Z. Bao and M. Xing, Logarithm bispectrum-based approach to radar range profile for automatic target recognition, The Journal of the Pattern Recognition Society, vol. 35, pp. 2643–2651, 2002.

[94] M. R. Inggs and A. D. Robinson, Ship target recognition using low resolution radar and neural networks, IEEE Trans. on Aerospace and Electronic Systems, vol. 35, No 2, pp. 386–393, 1999,.

[95] S. Sayama and M. Sekine, Log-normal, log-Weibull and K-distributed sea clutter, IEICE Trans. Commun., vol. E85-B, No 7, pp. 1375–1381, 2002.

[96] Y. D. Shirman, S. A. Gorshkov, S. P. Leshenko, V. M. Orlenko, S. Y. Sedyshev and O. I. Sukharevskiy, Computer simulation of aerial targets, radar scattering, recognition, detection and tracking, Boston-London, Artech House, 2002.

[97] Victor Chen, The Micro-Doppler Effect in Radar, Artech House, London, 2011.

[98] A. Zyweck and R. E. Bogner, Radar target classification of commercial aircraft, IEEE Trans. Antennas Propag., vol. 32, No 2, pp. 598–606, 1996.

[99] K.-Tae Kim; D.-K. Seo and H.-T. Kim, Efficient radar target recognition using the MUSIC algorithm and invariant features, IEEE Transactions on Antennas and Propagation, vol. 50, No 3, pp. 325–337, March 2002.

[100] P. O. Molchanov, J. T. Astola, K. O. Egiazarian and A. V. Totsky, Moving target classification in ground surveillance radar ATR system by using novel bicepstral-based information features, European Radar Conference (EuRAD), 2011, pp.194–197, 12–14 Oct. 2011.

[101] P. Molchanov, K. Egiazarian, A. Totsky, S. Leshchenko and M. Rosa-Zurera, Aerial target classification by micro-Doppler signatures and bicoherence-based features, 9th European Radar Conference (EuRad), pp. 214–217, Oct. 2012.

[102] D. Gabor, Theory of communication, J. IEE (London), vol. 93, pp. 429–457, 1946.

[103] A. W. Rihaczek, Signal energy distribution in the time and frequency domain, IEEE Trans. Inform. Theory, vol. IT-14, No 3, pp. 369–374, May 1968.

[104] L. Cohen, Time-frequency distributions – a review, Proc. IEEE, vol. 77, No 4, pp. 941–981, July 1989.

[105] B. Boashash, Estimating and interpreting the instantaneous frequency of a signal – Part 1: Fundamentals, Proc. IEEE, vol. 80, No 4, pp. 520–538, April 1992.

[106] B. Boashash, Estimating and interpreting the instantaneous frequency of a signal – Part 2: Algorithms and Applications, Proc. IEEE, vol. 80, No 4, pp. 540–568, April 1992.

[107] O. P. Kenny and B. Boashash, Time-frequency analysis of backscattered signals from diffuse radar targets, IEE Proceedings-F, vol. 140, No 3, pp. 198–208, June 1993.

[108] P. van Dorp and F.C. A. Groen, Feature-based human motion parameter estimation with radar, IET Radar, Sonar and Navigation, vol 2. No 2. pp. 135–145, 2008.

[109] I. Bilik, J. Tabrikian and A. Cohen, GMM-based target classification for ground surveillance Doppler radar, IEEE Trans. Aerospace and Electronic Systems, vol. 42, pp. 267–278, January 2006.

[110] J. Ville, Théorie et applications de la notion de signal analytique, Cables et Transmission, vol. 2, pp. 61–74, 1948.

[111] C. H. Page, Instantaneous power spectra, J. Appl. Phys., vol. 23, pp. 103–106, 1952.

[112] N. L. Gerr, Introducing a third-order Wigner distribution, Proceedings of the IEEE, vol. 76, pp. 290–292, March 1988.

[113] J. Fonollosa and C. L. Nikias, Analysis of transient signals using higher order time-frequency distributions, in Proc. IEEE International Conf. Acoustics, Speech and Signal Processing, San Francisco, March 1992, pp. V197–V200.

[114] A. Swami, Third-order Wigner distributions: Definitions and properties, in Proc. IEEE Internat. Conf. Acoustics, Speech and Signal Processing, Toronto, May 1991, pp. 3081–3084.

[115] A. V. Totsky, I. V. Kurbatov, G. I. Khlopov, S. I. Khomenko, V. Ye. Morozov, J. T. Astola and K. O. Egiazarian, Time-frequency analysis of radar backscattered signals using phase coupled frequencies extracted from time-varying bispectrum estimates, Proc. 16th Internat. Conf. Microwaves, Radar and Wireless Communications MIKON 2006, Poland, Krakow, May 22–26, 2006, vol. I, pp. 203–206.

[116] J. T. Astola, K. O. Egiazarian, G. I. Khlopov, S. I. Khomenko, I. V. Kurbatov, V. Ye. Morozov, A. L. Tepliuk and A. V. Totsky, Time-frequency analysis of ground surveillance Doppler radar echo signals by using short-time cross-bispectrum estimates, Proc. of International Radar Symposium IRS 2007, 5–7 September, 2007, Cologne, Germany, pp. 805–808.

[117] J. T. Astola, K. O. Egiazarian, G. I. Khlopov, S. I. Khomenko, I. V. Kurbatov, V. Ye. Morozov and A. V. Totsky, Application of bispectrum estimation for time-frequency analysis of ground surveillance Doppler radar echo signals, IEEE Trans. on Instrumentation and Measurement, vol. 57, No 9, pp. 1949–1957, Sept. 2008.

[118] G. I. Khlopov, Coherent radar in short millimeter wave band, in MSMW'04 Symposium Proceedings, 5th International Kharkov Symposium on Physics and Engineering of Microwaves, Millimeter and Submillimeter Waves, Kharkov, Ukraine, June 21–26, 2004, vol. 1, pp.103–108.

[119] V. I. Lutzenko, G. I. Khlopov and I. V. Popov, Informative characters in spectral – polarization images of backscattering from surface objects, in Proc. International Radar Symposium IRS 2006, Poland, Krakow, May 24–26, pp. 271–274.

[120] G. I. Khlopov, S. I. Khomenko, P. A. Molchanov, V. Ye. Morozov, A. L. Tepliuk and A. V. Totsky, Comparative analysis of spectrum and bispectrum estimations of coherent millimeter radar signals scattered by vegetation and precipitation, Proc. of International Radar Symposium IRS 2008, 21–23 May, 2008, Wroclaw, Poland, pp. 1–4.

[121] V. K. Volosyuk and V. F. Kravchenko, Statistical Theory of Radiotechnical Systems of Remote Sensing and Radar, V. F. Kravchenko, ed., Fizmatlit, Moscow, 2008 [in Russian].

[122] A. A. Zelensky, V. F. Kravchenko, V. V. Pavlikov, V. I. Pustovoit and A. V. Totsky, Smoothing of the Bispectral Density Estimate Based on Digital Nonlinear Filtering and the Kravchenko Weight Functions, Doklady Physics, vol. 59, No 7, pp. 304–308, 2014.

[123] V. K. Volosyuk, V. F. Kravchenko, V. V. Pavlikov and V. I. Pustovoit, Statistical Synthesis of Radiometric Imaging Formation in Scanning Radiometers with Signal Weight Processing by Kravchenko Windows, Doklady Physics, vol. 59, No 5, pp. 219–222, 2014.

[124] V. K. Volosyuk, Yu. V. Gulyaev, V. F. Kravchenko, B. G. Kutuza, V. V. Pavlikov and V.I. Pustovoit, Modern Methods for Optimal SpatioTemporal Signal Processing in Active, Passive, and Combined Active–Passive RadioEngineering Systems, Review, Journal of Communications Technology and Electronics, vol. 59, No 2, pp. 97–118, 2014.