Selected Publications of Franz B. Tuteur

References

[1] J. L. Bower and F. B. Tuteur, "Dynamic operation of force compensated hydraulic throttling valve," *Trans. American Society of Mechanical Engineers*, vol. 75, no. 7, pp. 1395 – 1406, 1953.

[2] R. Gelfand, B. J. Shinn, and F. B. Tuteur, "Automatic field plotter," *Trans. American Institute of Electrical Engineers – Communications and Electronics*, vol. 74, no. 17, Part 1, pp. 73 – 78, 1955.

[3] J. E. Gibson and F. B. Tuteur, "Response of relay amplifiers with feedback," *Trans. AIEE*, vol. 76, no. 33, Part 2, pp. 303 – 307, 1957.

[4] J. E. Gibson, F. B. Tuteur, and T. J. Mapes, "New hydraulic servo valve for pulse-length-modulation operation," in *Proc. ASME*, 1957, p. 5.

[5] J. E. Gibson and F. B. Tuteur, *Control System Components*. New York, NY: McGraw Hill, 1958.

[6] R. L. Moruzzi and F. B. Tuteur, "Nonlinear servomechanism of limited dynamic range," *Electrical Engineering*, vol. 79, no. 12, p. 1041, 1960.

[7] ——, "Nonlinear servomechanism of limited dynamic range," *Trans. American Institute of Electrical Engineers – Applications and Industry*, vol. 79, no. Part 2, 51, pp. 314 – 320, 1960.

[8] P. K. Bohacek and F. B. Tuteur, "Stability of servomechanisms with friction and stiction in output element," *IRE Trans. on Automatic Control*, vol. AC-6, no. 2, pp. 222 – 227, May 1961. [Online]. Available: http://dx.doi.org/10.1109/TAC.1961.1105200

[9] F. B. Berger and F. B. Tuteur, "Radar system," U.S. Patent 3,008,138, Nov. 7, 1961.

[10] I. Selin and F. B. Tuteur, "Synchronization of coherent detectors," *IEEE Trans. on Communication Systems*, vol. CS-11, no. 1, pp. 100 – 109, Mar. 1963.

[11] F. B. Tuteur and J. S. Tyler, Jr., "Optimal control theory applied to probabilistic intercept problem," in *IEEE – NEREM Record*, vol. 5, 1963, pp. 74 – 75.

[12] F. B. Tuteur, "Theory and application of Liapunov's direct method (book review)," *Proceedings of the IEEE*, vol. 51, no. 8, pp. 1161–1161, Aug. 1963.

[13] P. K. Bohacek and F. B. Tuteur, "Signal acquisition in coherent receiving systems," *IEEE Trans. on Communication Systems*, vol. CS-12, no. 2, pp. 195 – 201, Jun. 1964.

[14] F. B. Tuteur and J. S. Tyler, Jr., "Optimal-control theory applied to a probabilistic intercept problem," *IEEE Trans. on Automatic Control*, vol. 9, no. 4, pp. 498–507, Oct. 1964.

[15] F. B. Tuteur, "Optimum detection of stochastic signal in Gaussian noise of unknown power level," in *IEEE – Communications Convention*, 1965, pp. 63 – 66.

[16] P. M. Schultheiss and F. B. Tuteur, "Optimum and suboptimum detection of directional gaussian signals in an isotropic gaussian noise field part I: Likelihood ratio and power detectors," *IEEE Trans. on Military Electronics*, vol. 9, no. 3, pp. 197–208, July 1965.

[17] ——, "Optimum and suboptimum detection of directional gaussian signals in an isotropic gaussian noise field part II: Degradation of detectability due to clipping," *IEEE Trans. on Military Electronics*, vol. 9, no. 3, pp. 208–211, July 1965.

[18] F. B. Tuteur, "Optimum detection of a stochastic signal in a Gaussian noise of unknown strength," *Proceedings of the IEEE*, vol. 53, no. 5, pp. 487–488, May 1965.

[19] ——, "Detectability of directional amplitude-modulated noise signals in an isotropic noise background of unknown power level," *IEEE Trans. on Information Theory*, vol. 11, no. 4, pp. 591–593, Oct. 1965.

[20] J. S. Tyler, Jr. and F. B. Tuteur, "The use of a quadratic performance index to design multivariable control systems," *IEEE Trans. on Automatic Control*, vol. 11, no. 1, pp. 84–92, Jan. 1966.

[21] F. B. Tuteur, "On detection of transiting broadband targets in noise of uncertain level," *IEEE Trans. on Communication Technology*, vol. CM-15, no. 1, pp. 61 – 69, Feb. 1967. [Online]. Available: http://dx.doi.org/10.1109/TCOM.1967.1089538

[22] J. H. Chang and F. B. Tuteur, "Adaptive tapped delay line filters," in *Proceedings of the Second Annual Princeton Conference on Information Sciences and Systems*, Princeton, NJ, 1968, pp. 164 – 168.

[23] F. B. Tuteur, "On the detection of a moving noise source in a nonstationary noise background," *Journal of the Acoustical Society of America*, vol. 44, no. 4, pp. 912 – 918, 1968.

[24] R. A. Nash, Jr. and F. B. Tuteur, "Effect of uncertainties in noise covariance matrices on maximum likelihood estimate of vector," *IEEE Trans. on Automatic Control*, vol. AC-13, no. 1, pp. 86 – 88, Feb. 1968. [Online]. Available: http://dx.doi.org/10.1109/TAC.1968.1098799

[25] J. H. Chang and F. B. Tuteur, "Adaptation in nonstationary environment," in *IEEE Systems Science and Cybernetics Conference Record*, San Francisco, CA, 1968, pp. 233 – 239.

[26] F. B. Tuteur, "On detection of moving noise source in nonstationary noise background," *Journal of the Acoustical Society of America*, vol. 44, no. 4, pp. 912 – 918, 1968.

[27] A. N. Venetsanopoulos and F. B. Tuteur, "Modeling of the surface scattering channel as a time-varying stochastic filter," in *Digest of Technical Papers of the 1970 IEEE Conference and Engineering in the Ocean Environment*, Panama City, FL, 1970, pp. 56 – 59.

[28] G. W. Beakley, F. B. Tuteur, J. Henrichon, E. G., and K. S. Fu, "Comments on a 'a nonparametric partitioning procedure for pattern classification'," *IEEE Trans. on Computers*, vol. C-19, no. 4, pp. 362 – 3, Apr. 1970.

[29] J. H. Chang and F. B. Tuteur, "Optimum adaptive array processor," in *Proceedings of the Symposium on Computer Processing in Communications*, New York, NY, 1970, pp. 695 – 710.

[30] H. R. Dessau and F. B. Tuteur, "Design of a least upper bound fuel optimal system with measurement uncertainty," in *Proceedings of the 3rd Hawaii International Conference on System Sciences*, vol. 1, Honolulu, HI, 1970, pp. 485 – 8.

[31] A. N. Venetsanopoulos and F. B. Tuteur, "Transmitter-receiver optimization for active signaling over undersea acoustic channels," *IEEE Trans. on Communication Technology*, vol. CM-19, no. 5, pp. 649 – 59, Oct. 1971.

[32] J. H. Chang and F. B. Tuteur, "A new class of adaptive array processors," *Journal of the Acoustical Society of America*, vol. 49, no. 3, pp. 639 – 49, 1971.

[33] H. R. Dessau and F. B. Tuteur, "Sub-optimal design of a closed-loop least-upper-bound fuel control," *Automatica*, vol. 7, no. 4, pp. 431 – 437, 1971.

[34] H. Stark, F. B. Tuteur, and M. Sayar, "Optical processing of radar signals with Fresnel diffraction masks," *Applied Optics*, vol. 10, no. 12, pp. 2728 – 2733, 1971.

[35] A. N. Venetsanopoulos and F. B. Tuteur, "Stochastic filter modeling for the sea-surface scattering channel," *Journal of the Acoustical Society of America*, vol. 49, no. 4, pp. 1100 – 1107, 1971.

[36] ——, "Upper bound on the signal-to-noise ratio at the output of a threshold receiver," *IEEE Trans. on Information Theory*, vol. 17, no. 6, pp. 753–755, Nov. 1971.

[37] F. B. Tuteur, "Identification of a medical care facility," in *Proceedings of the 1972 International Conference on Cybernetics and Society*, Washington, DC, USA, 1972, pp. 553 – 554.

[38] G. W. Beakley and F. B. Tuteur, "Distribution-free pattern verification using statistically equivalent blocks," *IEEE Transactions on Computers*, vol. C-21, no. 12, pp. 1337 – 1347, 1972.

[39] H. Stark and F. B. Tuteur, "Higher orders in the diffraction pattern of random scenes in coherent optical systems," *Journal of the Optical Society of America*, vol. 63, no. 6, pp. 675 – 685, 1973.

[40] F. B. Tuteur and A. S. Holzer, "Simulation study of an emergency room," in *Modelling and simulation, vol.4*, Pittsburgh, PA, USA, 1973, pp. 382 – 385.

[41] J. F. McDonald and F. B. Tuteur, "Moment characterization of a doubly spread surface-scatter channel at high rayleigh parameters," *Proceedings of the IEEE*, vol. 62, no. 11, pp. 1606 – 1608, Nov. 1974.

[42] ——, "Calculation of the range-Doppler plot for a doubly spread surface-scatter channel at high Rayleigh parameters," *Journal of the Acoustical Society of America*, vol. 57, no. 5, pp. 1025 – 1029, 1975.

[43] J. F. McDonald, F. B. Tuteur, and J. G. Zornig, "Spatial interfrequency correlation effects in a surface-scatter channel," *Journal of the Acoustical Society of America*, vol. 59, no. 6, pp. 1284 – 1293, 1976.

[44] F. B. Tuteur, H. Tung, and J. F. McDonald, "Second-order statistical moments of a surface scatter channel with multiple wave direction and dispersion," *IEEE Trans. on Communications*, vol. CM-24, no. 8, pp. 820 – 831, Aug. 1976. [Online]. Available: http://dx.doi.org/10.1109/TCOM.1976.1093378

[45] F. B. Tuteur, "Underwater acoustic scatter channels with several bounces," *Journal of the Acoustical Society of America*, vol. 60, no. 4, pp. 840 – 843, 1976.

[46] F. B. Tuteur and J. F. McDonald, "Scattering function for multiple-bounce underwater acoustic channels," *Journal of the Acoustical Society of America*, vol. 64, no. 2, pp. 614 – 621, 1978.

[47] H. Stark and F. B. Tuteur, *Modern Electrical Communications: Theory and Systems*. Englewood Cliffs, NJ: Prentice-Hall, 1979.

[48] T. P. Yunck, F. B. Tuteur, and J. Wallace, "Discriminating classes of mental activity in humans via the EEG," *Journal of Cybernetics and Information Science*, vol. 2, no. 1, pp. 3 – 11, 1979.

[49] P. D. Bergey, J. D. Wallace, F. B. Tuteur, and R. E. Neil, "A quantitative approach to EEG photic flash response," in *Proceedings of the Third Annual Symposium on Computer Application in Medical Care*, Washington, DC, 1979, pp. 684 – 690.

[50] T. P. Yunck and F. B. Tuteur, "Comparison of decision rules for automatic EEG classification," *IEEE Transactions on Pattern Analysis and Machine Intelligence*, vol. PAMI-2, no. 5, pp. 420 – 428, 1980.

[51] ——, "Comparison of decision rules for automatic EEG classification," in *Eighth Annual Northeast Bioengineering Conference*, Cambridge, MA, USA, 1980, pp. 362 – 370.

[52] F. B. Tuteur, H. Tung, and J. G. Zornig, "Asymmetric Doppler amplitudes in the surface scatter channel for crosswind transmitter-receiver geometry," *Journal of the Acoustical Society of America*, vol. 68, no. 4, pp. 1184 – 1192, 1980.

[53] F. B. Tuteur and J. Presley, J. A., "Spectral estimation of space-time signals with a DIMUS array," *Journal of the Acoustical Society of America*, vol. 70, no. 1, pp. 80 – 89, 1981.

[54] G. Shichman and F. B. Tuteur, "A hierarchical nonparametric classification strategy for discriminating EEG patterns of higher cortical functions (hcf)," in *IEEE 1981 Frontiers of Computers in Medicine*, Houston, TX, USA, 1981, pp. 9 – 12.

[55] F. B. Tuteur, "Performance of an adaptive array processor subjected to time-varying interference," in *Adaptive Systems in Control and Signal Processing 1983. Proceedings of the IFAC Workshop*, San Francisco, CA, USA, 1984, pp. 233 – 241.

[56] R. O. Kenet, F. B. Tuteur, and R. J. Cohen, "Closed-loop identification of hemodynamic control systems," in *Proceedings of the IASTED International Symposium on Modelling and Simulation*, Lugano, Switzerland, 1985, pp. 356 – 358.

[57] R. Kuc, F. B. Tuteur, and J. R. Vaisnys, "Determining vocal tract shape by applying dynamic constraints," in *ICASSP 85. Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing*, Tampa, FL, 1985, pp. 1101 – 1104.

[58] W. H. Gilson, P. Schultheiss, F. B. Tuteur, S. K. Holland, and S. C. Orphanoudakis, "Error bounds on Doppler ultrasound blood flow measurements," in *Proceedings of the Twelfth Annual Northeast Bioengineering Conference*, New Haven, CT, 1986, pp. 253 – 256.

[59] F. B. Tuteur and Y. Rockah, "A new method for signal detection and estimation using the eigenstructure of the covariance difference," in *Proc. ICASSP 86*, Tokyo, Japan, 1986, pp. 2811 – 2814.

[60] R. O. Kenet, F. B. Tuteur, R. D. Berger, S. Akselrod, and R. J. Cohen, "Closed-loop identification of beat-to-beat interactions between heart rate and blood pressure," in *Proceedings of the Twelfth Annual Northeast Bioengineering Conference)*, New Haven, CT, 1986, pp. 111 – 114.

[61] F. B. Tuteur, Y. Rockah, and D. Chen, "The covariance difference method in signal detection," in *Onzieme Colloque sur le Traitement du Signal et des Images (Eleventh Symposium on Signal and Image Processing)*, Nice, France, 1987, pp. 65 – 67.

[62] H. Stark, F. B. Tuteur, and J. B. Anderson, *Modern Electrical Communications: Analog, Digital, and Optical Systems. Second edition.* Upper Saddle River, NJ: Prentice-Hall, 1988.

[63] S. Li and F. B. Tuteur, "Estimation of underwater source parameters by use of multipath information," in *Fourth Annual ASSP Workshop on Spectrum Estimation and Modeling*, Minneapolis, MN, 1988, pp. 258 – 263. [Online]. Available: http://dx.doi.org/10.1109/SPECT.1988.206203

[64] F. B. Tuteur, "Wavelet transformations in signal detection," in *Proc. ICASSP 88*, New York, NY, 1988, pp. 1435 – 8. [Online]. Available: http://dx.doi.org/10.1109/ICASSP.1988.196869

[65] ——, "Wavelet transformations in signal detection," in *Identification and System Parameter Estimation 1988. Selected Papers from the Eighth IFAC/IFORS Symposium*, Beijing, China, 1989, pp. 1061 – 1065.