
Bibliography

- Abramowitz, M. and Stegun, I. A., eds., *Handbook of Mathematical Functions, with Formulas, Graphs, and Mathematical Tables*, Dover Publications, New York, NY, 1970.
- Balanis, C. A., *Antenna Theory, Analysis and Design*, Harper & Row, New York, 1982.
- Barkat, M., *Signal Detection and Estimation*, Artech House, Norwood, MA, 1991.
- Barton, D. K., *Modern Radar System Analysis*, Artech House, Norwood, MA, 1988.
- Benedict, T. and Bordner, G., Synthesis of an Optimal Set of Radar Track-While-Scan Smoothing Equations, *IRE Transaction on Automatic Control*, Ac-7, July 1962, pp. 27-32.
- Berkowitz, R. S., *Modern Radar - Analysis, Evaluation, and System Design*, John Wiley & Sons, Inc, New York, 1965.
- Beyer, W. H., *CRC Standard Mathematical Tables*, 26th edition, CRC Press, Boca Raton, FL, 1981.
- Billetter, D. R., *Multifunction Array Radar*, Artech House, Norwood, MA, 1989.
- Blackman, S. S., *Multiple-Target Tracking with Radar Application*, Artech House, Norwood, MA, 1986.
- Blake, L. V., *A Guide to Basic Pulse-Radar Maximum Range Calculation. Part-I: Equations, Definitions, and Aids to Calculation*, Naval Res. Lab. Report 5868, 1969.
- Blake, L. V., *Radar-Range Performance Analysis*, Lexington Books, Lexington, MA, 1980.
- Boothe, R. R., *A Digital Computer Program for Determining the Performance of an Acquisition Radar Through Application of Radar Detection Probability Theory*, U.S. Army Missile Command, Report No. RD-TR-64-2, Redstone Arsenal, Alabama, 1964.
- Bowman, J. J., Piergiorgio, L. U., and Senior, T. B., *Electromagnetic and Acoustic Scattering by Simple Shapes*, North-Holland Pub. Co, Amsterdam, 1969.
- Brookner, E., ed., *Aspects of Modern Radar*, Artech House, Norwood, MA, 1988.
- Brookner, E., ed., *Practical Phased Array Antenna System*, Artech House, Norwood, MA, 1991.
- Brookner, E., *Radar Technology*, Lexington Books, Lexington, MA, 1996.
- Burdic, W. S., *Radar Signal Analysis*, Prentice Hall, Englewood Cliffs, NJ, 1968.

- Brookner, E., *Tracking and Kalman Filtering Made Easy*, John Wiley & Sons, New York, 1998.
- Cadzow, J. A., *Discrete-Time Systems, An Introduction with Interdisciplinary Applications*, Prentice Hall, Englewood Cliffs, NJ, 1973.
- Carlson, A. B., *Communication Systems, An Introduction to Signals and Noise in Electrical Communication*, 3rd edition, McGraw-Hill, New York, 1986.
- Carpentier, M. H., *Principles of Modern Radar Systems*, Artech House, Norwood, MA, 1988.
- Compton, R. T., *Adaptive Antennas*, Prentice Hall, Englewood Cliffs, NJ, 1988.
- Cook, E. C. and Bernfeld, M., *Radar Signals An Introduction to Theory and Application*, Artech House, Norwood, MA, 1993.
- Costas, J. P., A Study of a Class of Detection Waveforms Having Nearly Ideal Range-Doppler Ambiguity Properties, *Proc. IEEE* 72, 1984, pp. 996-1009.
- Curry, G. R., *Radar System Performance Modeling*, Artech House, Norwood, 2001.
- DiFranco, J. V. and Rubin, W. L., *Radar Detection*. Artech House, Norwood, MA, 1980.
- Dillard, R. A. and Dillard, G. M., *Detectability of Spread-Spectrum Signals*, Artech House, Norwood, MA, 1989.
- Ede, B., *Radar Principles, Technology, Applications*, Prentice Hall, Englewood Cliffs, NJ, 1993.
- Elsherbeni, A., Inman, M. J., and Riley, C., Antenna Design and Radiation Pattern Visualization, *The 19th Annual Review of Progress in Applied Computational Electromagnetics*, ACES'03, Monterey, CA, March 2003.
- Fehlner, L. F., *Marcum's and Swerling's Data on Target Detection by a Pulsed Radar*, Johns Hopkins University, Applied Physics Lab. Rpt. # TG451, July 2, 1962, and Rpt. # TG451A, September 1964.
- Fielding, J. E. and Reynolds, G. D., *VCCALC: Vertical Coverage Calculation Software and Users Manual*, Artech House, Norwood, MA, 1988.
- Gabriel, W. F., Spectral Analysis and Adaptive Array Superresolution Techniques, *Proc. IEEE*, Vol. 68, June 1980, pp. 654-666.
- Gelb, A., ed., *Applied Optimal Estimation*, MIT Press, Cambridge, MA, 1974.
- Goldman, S. J., *Phase Noise Analysis in Radar Systems, Using Personal Computers*, John Wiley & Sons, New York, NY, 1989.
- Grewal, M. S. and Andrews, A. P., *Kalman Filtering - Theory and Practice Using MATLAB*, 2nd edition, Wiley & Sons Inc., New York, 2001.
- Hamming, R. W., *Digital Filters*, 2nd edition, Prentice Hall, Englewood Cliffs, NJ, 1983.

- Hanselman, D. and Littlefield, B., *Mastering MATLAB 5, A Complete Tutorial and Reference*, MATLAB Curriculum Series, Prentice Hall, Englewood Cliffs, NJ, 1998.
- Hirsch, H. L. and Grove, D. C., *Practical Simulation of Radar Antennas and Radomes*, Artech House, Norwood, MA, 1987.
- Hovanesian, S. A., *Radar System Design and Analysis*, Artech House, Norwood, MA, 1984.
- James, D. A., *Radar Homing Guidance for Tactical Missiles*, John Wiley & Sons, New York, 1986.
- Jin, J., *The Finite Element Method in Electromagnetics*, John Wiley & Sons, New York, 2002.
- Kanter, I., Exact Detection Probability for Partially Correlated Rayleigh Targets, *IEEE Trans. AES-22*, March 1986, pp. 184-196.
- Kay, S. M., *Fundamentals of Statistical Signal Processing - Estimation Theory*, Volume I, Prentice Hall Signal Processing Series, Englewood Cliffs, NJ, 1993.
- Kay, S. M., *Fundamentals of Statistical Signal Processing - Detection Theory*, Volume II, Prentice Hall Signal Processing Series, Englewood Cliffs, NJ, 1993.
- Keller, J. B., Geometrical Theory of Diffraction, *Journal Opt. Soc. Amer.*, Vol. 52, February 1962, pp. 116-130.
- Klauder, J. R., Price, A. C., Darlington, S., and Albershiem, W. J., The Theory and Design of Chirp Radars, *The Bell System Technical Journal*, Vol. 39, No. 4, 1960.
- Klemm, R., *Principles of Space-Time Adaptive Processing*, 3rd Ed, IET, London UK, 2006.
- Knott, E. F., Shaeffer, J. F., and Tuley, M. T., *Radar Cross Section*, 2nd edition, Artech House, Norwood, MA, 1993.
- Lativa, J., Low-Angle Tracking Using Multifrequency Sampled Aperture Radar, *IEEE-AES Trans.*, Vol. 27, No. 5, September 1991, pp.797-805.
- Lee, S. W. and Mittra, R., Fourier Transform of a Polygonal Shape Function and Its Application in Electromagnetics, *IEEE Trans. Antennas and Propagation*, Vol. 31, January 1983, pp. 99-103.
- Levanon, N., *Radar Principles*, John Wiley & Sons, New York, 1988.
- Levanon, N. and Mozeson, E., Nullifying ACF Grating Lobes in Stepped-frequency Train of LFM Pulses, *IEEE-AES Trans.*, Vol. 39, No. 2, April 2003, pp. 694-703.
- Levanon, N. and Mozeson, E., *Radar Signals*, John Wiley-Interscience, Hoboken, NJ, 2004.
- Lewis, B. L., Kretschmer, Jr., F. F., and Shelton, W. W., *Aspects of Radar Signal Processing*, Artech House, Norwood, MA, 1986.
- Long, M. W., *Radar Reflectivity of Land and Sea*, Artech House, Norwood, MA, 1983.

- Lothes, R. N., Szymanski, M. B., and Wiley, R. G., *Radar Vulnerability to Jamming*, Artech House, Norwood, MA, 1990.
- Mahafza, B. R., *Introduction to Radar Analysis*, CRC Press, Boca Raton, FL, 1998.
- Mahafza, B. R., *Radar Systems Analysis and Design Using MATLAB*, 2nd Ed, Taylor & Francis, Boca Raton, FL, 2005.
- Mahafza, B. R. and Polge, R. J., Multiple Target Detection Through DFT Processing in a Sequential Mode Operation of Real Two-Dimensional Arrays, *Proc. of the IEEE Southeast Conf. '90*, New Orleans, LA, April 1990, pp. 168-170.
- Mahafza, B. R., Heifner, L.A., and Gracchi, V. C., Multitarget Detection Using Synthetic Sampled Aperture Radars (SSAMAR), *IEEE-AES Trans.*, Vol. 31, No. 3, July 1995, pp. 1127-1132.
- Mahafza, B. R. and Sajjadi, M., Three-Dimensional SAR Imaging Using a Linear Array in Transverse Motion, *IEEE-AES Trans.*, Vol. 32, No. 1, January 1996, pp. 499-510.
- Marchand, P., *Graphics and GUIs with MATLAB*, 2nd edition, CRC Press, Boca Raton, FL, 1999.
- Marcum, J. I., A Statistical Theory of Target Detection by Pulsed Radar, Mathematical Appendix, *IRE Trans.*, Vol. IT-6, April 1960, pp. 259-267.
- Medgyesi-Mitschang, L. N. and Putnam, J. M., Electromagnetic Scattering from Axially Inhomogenous Bodies of Revolution, *IEEE Trans. Antennas and Propagation.*, Vol. 32, August 1984, pp. 797-806.
- Meeks, M. L., *Radar Propagation at Low Altitudes*, Artech House, Norwood, MA, 1982.
- Melsa, J. L. and Cohn, D. L., *Decision and Estimation Theory*, McGraw-Hill, New York, 1978.
- Mensa, D. L., *High Resolution Radar Imaging*, Artech House, Norwood, MA, 1984.
- Meyer, D. P. and Mayer, H. A., *Radar Target Detection: Handbook of Theory and Practice*, Academic Press, New York, 1973.
- Monzingo, R. A. and Miller, T. W., *Introduction to Adaptive Arrays*, John Wiley & Sons, New York, 1980.
- Morchin, W., *Radar Engineer's Sourcebook*, Artech House, Norwood, MA, 1993.
- Morris, G. V., *Airborne Pulsed Doppler Radar*, Artech House, Norwood, MA, 1988.
- Nathanson, F. E., *Radar Design Principles*, 2nd edition, McGraw-Hill, New York, 1991.
- Navarro, Jr., A. M., *General Properties of Alpha Beta and Alpha Beta Gamma Tracking Filters*, Physics Laboratory of the National Defense Research Organization TNO, Report PHL 1977-92, January 1977.

- North, D. O., An Analysis of the Factors Which Determine Signal/Noise Discrimination in Pulsed Carrier Systems, *Proc. IEEE* 51, No. 7, July 1963, pp. 1015-1027.
- Oppenheim, A. V. and Schaffer, R. W., *Discrete-Time Signal Processing*, Prentice Hall, Englewood Cliffs, NJ, 1989.
- Oppenheim, A. V., Willsky, A. S., and Young, I. T., *Signals and Systems*, Prentice Hall, Englewood Cliffs, NJ, 1983.
- Orfanidis, S. J., *Optimum Signal Processing, an Introduction*, 2nd edition, McGraw-Hill, New York, 1988.
- Papoulis, A., *Probability, Random Variables, and Stochastic Processes*, 2nd edition, McGraw-Hill, New York, 1984.
- Parl, S. A., New Method of Calculating the Generalized Q Function, *IEEE Trans. Information Theory*, Vol. IT-26, No. 1, January 1980, pp. 121-124.
- Peebles, Jr., P. Z., *Probability, Random Variables, and Random Signal Principles*, McGraw-Hill, New York, 1987.
- Peebles, Jr., P. Z., *Radar Principles*, John Wiley & Sons, New York, 1998.
- Pettit, R. H., *ECM and ECCM Techniques for Digital Communication Systems*, Lifetime Learning Publications, New York, 1982.
- Polge, R. J., Mahafza, B. R., and Kim, J. G., *Extension and Updating of the Computer Simulation of Range Relative Doppler Processing for MM Wave Seekers*, Interim Technical Report, Vol. I, prepared for the U.S. Army Missile Command, Redstone Arsenal, Alabama, January 1989.
- Polge, R. J., Mahafza, B. R., and Kim, J. G., Multiple Target Detection Through DFT Processing in a Sequential Mode Operation of Real or Synthetic Arrays, *IEEE 21st Southeastern Symposium on System Theory*, Tallahassee, FL, 1989, pp. 264-267.
- Poularikas, A., *Signals and Systems Primer with MATLAB*, Taylor & Francis, Boca Raton, FL, 2007.
- Poularikas, A. and Ramadan, Z. M., *Adaptive Filtering Primer with MATLAB*, Taylor & Francis, Boca Raton, FL, 2006.
- Poularikas, A. and Seely, S., *Signals and Systems*, PWS Publishers, Boston, MA, 1984.
- Putnam, J. N. and Gerdera, M. B., CARLOS TM: A General-Purpose Three-Dimensional Method of Moments Scattering Code, *IEEE Trans. Antennas and Propagation*, Vol. 35, April 1993, pp. 69-71
- Reed, H. R. and Russell, C. M., *Ultra High Frequency Propagation*, Boston Technical Publishers, Inc., Lexington, MA, 1964.
- Resnick, J. B., *High Resolution Waveforms Suitable for a Multiple Target Environment*, MS Thesis, MIT, Cambridge, MA, June 1962.
- Richards, M. A., *Fundamentals of Radar Signal Processing*, McGraw-Hill, New York, 2005.
- Rihaczek, A. W., *Principles of High Resolution Radars*, McGraw-Hill, New York, 1969.

- Robertson, G. H., Operating Characteristics for a Linear Detector of CW Signals in Narrow-band Gaussian Noise, *Bell Sys. Tech. Journal*, Vol. 46 April 1967, pp. 755-774.
- Ross, R. A., Radar Cross Section of Rectangular Flat Plate as a Function of Aspect Angle, *IEEE Trans. AP-14*, 1966, p. 320.
- Ruck, G. T., Barrick, D. E., Stuart, W. D., and Krichbaum, C. K., *Radar Cross Section Handbook*, Volume 1, Plenum Press, New York, 1970.
- Ruck, G. T., Barrick, D. E., Stuart, W. D., and Krichbaum, C. K., *Radar Cross Section Handbook*, Volume 2, Plenum Press, New York, 1970.
- Rulf, B. and Robertshaw, G. A., *Understanding Antennas for Radar, Communications, and Avionics*, Van Nostrand Reinhold, 1987.
- Scanlan, M.J., ed., *Modern Radar Techniques*, Macmillan, New York, 1987.
- Scheer, J. A. and Kurtz, J. L., ed., *Coherent Radar Performance Estimation*, Artech House, Norwood, MA, 1993.
- Shanmugan, K. S. and Breipohl, A. M., *Random Signals: Detection, Estimation and Data Analysis*, John Wiley & Sons, New York, 1988.
- Shatz, M. P. and Polychronopoulos, G. H., *An Algorithm for Evaluation of Radar Propagation in the Spherical Earth Diffraction Region*. *IEEE Transactions on Antenna and Propagation*, VOL. 38, NO.8, August 1990, pp. 1249-1252.
- Sherman, S. M., *Monopulse Principles and Techniques*, Artech House, Norwood, MA.
- Singer, R. A., Estimating Optimal Tracking Filter Performance for Manned Maneuvering Targets, *IEEE Transaction on Aerospace and Electronics, AES-5*, July 1970, pp. 473-483.
- Skillman, W. A., *DETPROB: Probability of Detection Calculation Software and User's Manual*, Artech House, Norwood, MA, 1991.
- Skolnik, M. I., *Introduction to Radar Systems*, McGraw-Hill, New York, 1982.
- Skolnik, M. I., ed., *Radar Handbook*, 2nd edition, McGraw-Hill, New York, 1990.
- Song, J. M., Lu, C. C., Chew, W. C., and Lee, S. W., Fast Illinois SolverCode (FSIC), *IEEE Trans. Antennas and Propagation*, Vol. 40, June 1998, pp. 27-34.
- Stearns, S. D. and David, R. A., *Signal Processing Algorithms*, Prentice Hall, Englewood Cliffs, NJ, 1988.
- Stimson, G. W., *Introduction to Airborne Radar*, Hughes Aircraft Company, El Segundo, CA, 1983.
- Stratton, J. A., *Electromagnetic Theory*, McGraw-Hill, New York, 1941.
- Stremler, F. G., *Introduction to Communication Systems*, 3rd edition, Addison-Wesley, New York, 1990.
- Stutzman, G. E., Estimating Directivity and Gain of Antennas, *IEEE Antennas and Propagation Magazine* 40, August 1998, pp. 7-11.
- Swerling, P., Probability of Detection for Fluctuating Targets, *IRE Transaction*

- on Information Theory*, Vol. IT-6, April 1960, pp. 269-308.
- Taflove, A., *Computational Electromagnetics: The Finite-Difference Time-Domain Method*, Artech House, Norwood, MA, 1995.
- Van Trees, H. L., *Detection, Estimation, and Modeling Theory*, Part I, Wiley & Sons, Inc., New York, 2001.
- Van Trees, H. L., *Detection, Estimation, and Modeling Theory*, Part III, Wiley & Sons, New York, 2001.
- Van Trees, H. L., *Optimum Array Processing*, Part IV of *Detection, Estimation, and Modeling Theory*, Wiley & Sons, New York, 2002.
- Tzannes, N. S., *Communication and Radar Systems*, Prentice Hall, Englewood Cliffs, NJ, 1985.
- Urkowitz, H., *Decision and Detection Theory*, Unpublished Lecture Notes, Lockheed Martin Co., Moorestown, NJ.
- Urkowitz, H., *Signal Theory and Random Processes*, Artech House, Norwood, MA, 1983.
- Vaughn, C. R., Birds and Insects as Radar Targets: A Review, *Proc. IEEE*, Vol. 73, No. 2, February 1985, pp. 205-227.
- Wehner, D. R., *High Resolution Radar*, Artech House, Norwood, MA, 1987.
- Weiner, M. M., ed., *Adaptive Antennas and Receivers*, Taylor & Francis, Boca Raton, FL, 2006.
- White, J. E., Mueller, D. D., and Bate, R. R., *Fundamentals of Astrodynamics*, Dover Publications, New York, NY, 1971.
- Ziemer, R. E. and Tranter, W. H., *Principles of Communications, Systems, Modulation, and Noise*, 2nd edition, Houghton Mifflin, Boston, MA, 1985.
- Zierler, N., *Several Binary-Sequence Generators*, MIT Technical Report No. 95, Sept. 1955.