Bibliography

- [1] Aoki, S., and H. Kinoshita, "Note on the relation between the equinox and Guinot's non-rotating origin," *Celest. Mech.*, Vol. 29, No. 4, pp. 335–360, 1983.
- [2] Ashby, N., "Relativity and the Global Positioning System," *Physics Today*, Vol. 55, No. 5, pp. 41–47, May 2002.
- [3] Barlier, F., C. Berger, J. Falin, G. Kockarts, and G. Thuiller, "A thermospheric model based on satellite drag data," *Annales de Géophysique*, Vol. 34, No. 1, pp. 9–24, 1978.
- [4] Battin, R., An Introduction to the Mathematics and Methods of Astrodynamics, American Institute of Aeronautics and Astronautics, Reston, VA, 1999.
- [5] Bertiger, W., Y. Bar-Sever, E. Christensen, E. Davis, J. Guinn, B. Haines, R. Ibanez-Meier, J. Jee, S. Lichten, W. Melbourne, R. Muellerschoen, T. Munson, Y. Vigue, S. Wu, T. Yunck, B. Schutz, P. Abusali, H. Rim, W. Watkins, and P. Willis, "GPS precise tracking of TOPEX/Poseidon: Results and implications," *J. Geophys. Res.*, Vol. 99, No. C12, pp. 24,449–24,462, December 15, 1995.
- [6] Beutler, G., E. Brockmann, W. Gurtner, U. Hugentobler, L. Mervart, M. Rothacher, and A. Verdun, "Extended orbit modeling techniques at the CODE Processing Center of the International GPS Service for Geodynamics (IGS): theory and initial results," *Manuscripta Geodaetica*, Vol. 19, No. 6, pp. 367–385, April 1994.
- [7] Bierman, G. J., Factorization Methods for Discrete Sequential Estimation, Academic Press, New York, 1977.
- [8] Björck, A., Numerical Methods for Least Squares Problems, SIAM, Philadelphia, PA, 1996.

[9] Bond, V., and M. Allman, *Modern Astrodynamics*, Princeton University Press, Princeton, NJ, 1996.

- [10] Born, G. H., D. B. Goldstein, and B. Thompson, "An Analytical Theory for Orbit Determination", *J. Astronaut. Sci.*, Vol. 49, No. 2, pp. 345–361, April–June 2001.
- [11] Born, G., J. Mitchell, and G. Hegler, "GEOSAT ERM mission design," J. Astronaut. Sci., Vol. 35, No. 2, pp. 119–134, April–June 1987.
- [12] Born, G. H., B. D. Tapley, and M. L. Santee, "Orbit determination using dual crossing arc altimetry," *Acta Astronautica*, Vol. 13, No. 4, pp. 157– 163, 1986.
- [13] Boucher, C., Z. Altamini, and P. Sillard, *The International Terrestrial Reference Frame (ITRF97)*, IERS Technical Note 27, International Earth Rotation Service, Observatoire de Paris, May 1999.
- [14] Brouwer, D., "Solutions of the problem of artificial satellite theory without drag," *Astron. J.*, Vol. 64, No. 9, pp. 378–397, November 1959.
- [15] Brouwer, D., and G. Clemence, *Methods of Celestial Mechanics*, Academic Press, New York, 1961.
- [16] Bryson, A. E., and Y. C. Ho, *Applied Optimal Control*, Hemisphere Publishing Corp., Washington, DC, 1975.
- [17] Bucy, R., and P. Joseph, *Filtering for Stochastic Processes*, John Wiley & Sons, Inc., New York, 1968.
- [18] Cajori, F., A History of Mathematics, MacMillan Co., New York, 1919.
- [19] Carlson, N. A., "Fast triangular formulation of the square root filter", *AIAA J.*, Vol. 11, No. 9, pp. 1239-1265, September 1973.
- [20] Chobotov, V. (ed.), *Orbital Mechanics*, American Institute of Aeronautics and Astronautics, Inc., Reston, VA, 1996.
- [21] Christensen, E., B. Haines, K. C. McColl, and R. S. Nerem, "Observations of geographically correlated orbit errors for TOPEX/Poseidon using the Global Positioning System," *Geophys. Res. Ltrs.*, Vol. 21, No. 19, pp. 2175–2178, September 15, 1994.
- [22] Cook, G. E., "Perturbations of near-circular orbits by the Earth's gravitational potential," *Planetary and Space Science*, Vol. 14, No. 5, pp. 433–444, May 1966.

[23] Cruickshank, D. R., Genetic Model Compensation: Theory and Applications, Ph. D. Dissertation, The University of Colorado at Boulder, 1998.

- [24] Curkendall, D. W., *Problems in estimation theory with applications to orbit determination*, UCLA-ENG-7275, UCLA School Engr. and Appl. Sci., Los Angeles, CA, September 1972.
- [25] Dahlquist, G., and A. Björck, *Numerical Methods*, Prentice-Hall, Englewood Cliffs, NJ, 1974 (translated to English: N. Anderson).
- [26] Danby, J. M. A., Fundamentals of Celestial Mechanics, Willmann-Bell, Inc., Richmond, VA, 1988.
- [27] Davis, J. C., Statistics and Data Analysis in Geology, John Wiley & Sons Inc., New York, 1986.
- [28] Defense Mapping Agency, *Department of Defense World Geodetic System* 1984, DMA Technical Report 8350.2, Washington, DC, September, 1987.
- [29] Degnan, J., and J. McGarry, "SLR2000: Eyesafe and autonomous satellite laser ranging at kilohertz rates," *SPIE Vol. 3218, Laser Radar Ranging and Atmospheric Lidar Techniques*, pp. 63–77, London, 1997.
- [30] Desai, S. D., and B. J. Haines, "Near real-time GPS-based orbit determination and sea surface height observations from the Jason-1 mission," *Marine Geodesy*, Vol. 26, No. 3–4, pp. 187–199, 2003.
- [31] Deutsch, R., *Estimation Theory*, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1965.
- [32] Dorroh, W. E., and T. H. Thornton, "Strategies and systems for navigation corrections," *Astronautics and Aeronautics*, Vol. 8, No. 5, pp. 50–55, May 1970.
- [33] Dunn, C., W. Bertiger, Y. Bar-Sever, S. Desai, B. Haines, D. Kuang, G. Franklin, I. Harris, G. Kruizinga, T. Meehan, S. Nandi, D. Nguyen, T. Rogstad, J. Thomas, J. Tien, L. Romans, M. Watkins, S. C. Wu, S. Bettadpur, and J. Kim, "Instrument of GRACE," GPS World, Vol. 14, No. 2, pp. 16–28, February 2003.
- [34] Dyer, P., and S. McReynolds, "Extension of square-root filtering to include process noise," *J. Optim. Theory Appl.*, Vol. 3, No. 6, pp. 444–458, 1969.
- [35] Einstein, A., "Zur Elektrodynamik bewegter Körper," Annalen der Physik, Vol. 17, No. 10, pp. 891–921, 1905 (translated to English: Perrett, W., and G. Jeffery, The Principle of Relativity, Methuen and Co., 1923; republished by Dover, New York).

[36] El'Yasberg, P. E., Introduction to the Theory of Flight of Artificial Earth Satellites, translated from Russian, Israel Program for Scientific Translations, 1967.

- [37] Fisher, R. A., "On an absolute criteria for fitting frequency curves," *Mess. Math.*, Vol. 41, pp. 155–160, 1912.
- [38] Fliegel, H., T. Gallini, and E. Swift, "Global Positioning System radiation force models for geodetic applications", *J. Geophys. Res.*, Vol. 97, No. B1, pp. 559–568, January 10, 1992.
- [39] Freeman, H., Introduction to Statistical Inference, Addison-Wesley, 1963.
- [40] Gauss, K. F., Theoria Motus Corporum Coelestium, 1809 (Translated into English: Davis, C. H., Theory of the Motion of the Heavenly Bodies Moving about the Sun in Conic Sections, Dover, New York, 1963).
- [41] Gelb, A. (ed.), *Applied Optimal Estimation*, Massachusetts Institute of Technology Press, Cambridge, MA, 1974.
- [42] Gentleman, W. M., "Least squares computations by Givens transformations without square roots," *J. Inst. Math. Applic.*, Vol. 12, pp. 329–336, 1973.
- [43] Givens, W., "Computation of plane unitary rotations transforming a general matrix to triangular form," *J. Appl. Math.*, Vol. 6, pp. 26–50, 1958.
- [44] Goldstein, D. B., G. H. Born, and P. Axelrad, "Real-time, autonomous, precise orbit determination using GPS," *J. ION*, Vol. 48, No. 3, pp. 169–179, Fall 2001.
- [45] Golub, G. H., and C. F. Van Loan, *Matrix Computations*, Johns Hopkins University Press, 1996.
- [46] Goodyear, W. H., "Completely general closed form solution for coordinates and partial derivatives of the two-body problem," *Astron. J.*, Vol. 70, No. 3, pp. 189–192, April 1965.
- [47] Graybill, F. A., An Introduction to Linear Statistical Models, McGraw-Hill, New York, 1961.
- [48] Grewal, M. S., and A. P. Andrews, *Kalman Filtering: Theory and Practice*, Prentice Hall, 1993.
- [49] Gruber, T., A. Bode, C. Reigber, P. Schwintzer, G. Balmino, R. Biancale, J. Lemoine, "GRIM5-C1: Combination solution of the global gravity field to degree and order 120," *Geophys. Res. Ltrs.*, Vol. 27, No. 24, pp. 4005– 4008, December 2000.

[50] Heffes, H., "The effects of erroneous models on the Kalman filter response", *Trans. Auto. Cont.*, Vol. AC-11, pp. 541–543, July 1966.

- [51] Heiskanen, W., and H. Moritz, *Physical Geodesy*, W. H. Freeman and Co., San Francisco, 1967.
- [52] Helmert, F. R., "Zur Bestimmung kleiner Flächenstücke des Geoids aus Lothabweichungen mit Rücksicht auf Lothkrümmung", Sitzungsberichte Preuss. Akad. Wiss., Berlin, Germany, 1900.
- [53] Helstrom, C. W., Probability and Stochastic Processes for Engineers, MacMillan, 1984.
- [54] Herring, T., "Modeling atmospheric delays in the analysis of space geodetic data," in *Refraction of Transatmospheric Signals in Geodesy*, eds. J. C. DeMunck and T. A. Th. Spoelstra, Netherlands Geodetic Commission Publications in Geodesy, 36, pp. 157-164, 1992.
- [55] Herring, T., B. Buffett, P. Mathews, and I. Shapiro, "Free nutations of the Earth: influence of inner core dynamics," *J. Geophys. Res.*, Vol. 96, No. B5, pp. 8259–8273, May 10, 1991.
- [56] Hofmann-Wellenhof, B., H. Lichtenegger, and J. Collins, *Global Positioning System: Theory and Practice*, Springer-Verlag, Wien-New York, 1997.
- [57] Householder, A. S., "Unitary triangularization of a nonsymmetric matrix," *J. Assoc. Comput. Mach.*, Vol. 5, No. 4, pp. 339–342, October 1958.
- [58] Huang, C., J. C. Ries, B. Tapley, and M. Watkins, "Relativistic effects for near-Earth satellite orbit determination," *Celest. Mech.*, Vol. 48, No. 2, 167-185, 1990.
- [59] Ingram, D. S., *Orbit determination in the presence of unmodeled accelerations*, Ph.D. Dissertation, The University of Texas at Austin, 1970.
- [60] Ingram, D. S., and B. D. Tapley, "Lunar orbit determination in the presence of unmodeled accelerations," *Celest. Mech.*, Vol. 9, No. 2, pp. 191–211, 1974.
- [61] Jacchia, L., Thermospheric temperature, density and composition: new models, Special Report 375, Smithsonian Astrophysical Observatory, Cambridge, MA, 1977.
- [62] Jazwinski, A. H., Stochastic Process and Filtering Theory, Academic Press, New York, 1970.

[63] Kalman, R. E., "A New Approach to Linear Filtering and Prediction Theory," *J. Basic Eng.*, Vol. 82, Series E, No. 1, pp. 35–45, March, 1960.

- [64] Kalman, R. E. and R. S. Bucy, "New Results in Linear Filtering and Prediction Theory," *J. Basic Eng.*, Vol. 83, Series D, No. 1, pp. 95–108, March, 1961.
- [65] Kaminski, P. G., A. E. Bryson, and S. F. Schmidt, "Discrete square root filtering: A survey of current techniques," *Trans. Auto. Cont.*, Vol. AC-16, No. 6, pp. 727–736, December 1971.
- [66] Kaplan, G. H. (ed.), *The IAU Resolutions on astronomical constants, time scales, and the fundamental reference frame*, USNO Circular No. 163, U.S. Naval Observatory, 1981.
- [67] Kaula, W. M., *Theory of Satellite Geodesy*, Blaisdell Publishing Co., Waltham, 1966 (republished by Dover, New York, 2000).
- [68] Kolmogorov, A. N., "Interpolation and Extrapolation of Stationary Random Sequences," *Bulletin of the Academy of Sciences of the USSR Math. Series*, Vol. 5, pp. 3–14, 1941.
- [69] Kovalevsky, J., I. Mueller, and B. Kolaczek (eds.), *Reference Frames in Astronomy and Geophysics*, Kluwer Academic Publishers, Dordrecht, 1989.
- [70] Kreyszig, E., Advanced Engineering Mathematics, John Wiley & Sons, Inc., New York, 1993.
- [71] Lambeck, K., *The Earth's Variable Rotation*, Cambridge University Press, Cambridge, 1980.
- [72] Lambeck, K., Geophysical Geodesy, Clarendon Press, Oxford, 1988.
- [73] Laplace, P. S., *Théorie Analytique de Probabilités*, Paris, 1812 (The 1814 edition included an introduction, *Essai Philosophique sur les Probabilités*, which has been translated into English: Dale, A. I., *Philosophical Essay on Probabilities*, Springer-Verlag, New York, 1995).
- [74] Lawson, C. L., and R. J. Hanson, *Solving Least Squares Problems*, Prentice-Hall, Inc. Englewood Cliffs, NJ, 1974 (republished by SIAM, Philadelphia, PA, 1995).
- [75] Le Systeme International d'Unites (SI), Bureau International des Poids et Mesures, Sevres, France, 1991.
- [76] Legendre, A. M., Nouvelles méthodes pour la détermination des orbites des comètes, Paris, 1806.

[77] Leick, A., GPS Satellite Surveying, J. Wiley & Sons, Inc., New York, 2003.

- [78] Lemoine, F., S. Kenyon, J. Factor, R. Trimmer, N. Pavlis, D. Chinn, C. Cox, S. Klosko, S. Luthcke, M. Torrence, Y. Wang, R. Williamson, E. Pavlis, R. Rapp, and T. Olson, *The development of the Joint NASA GSFC and the National Imagery and Mapping Agency (NIMA) Geopotential Model EGM96*, NASA/TP-1998-206861, Greenbelt, MD, July 1998.
- [79] Lemoine, F., D. Rowlands, S. Luthcke, N. Zelensky, D. Chinn, D. Pavlis, and G. Marr, "Precise orbit determination of GEOSAT follow-on using satellite laser ranging and intermission altimeter crossovers," NASA/CP-2001-209986, *Flight Mechanics Symposium*, John Lynch (ed.), NASA Goddard Space Flight Center, Greenbelt, MD, pp. 377–392, June 2001.
- [80] Lichten, S. M., "Estimation and filtering for high precision GPS positioning applications," *Manuscripta Geodaetica*, Vol. 15, pp. 159–176, 1990.
- [81] Liebelt, P. B., An Introduction to Optimal Estimation, Addison-Wesley, Reading, MA, 1967.
- [82] Lieske, J. H., T. Lederle, W. Fricke, and B. Morando, "Expressions for the precession quantities based upon the IAU (1976) System of Astronomical Constants," *Astronomy and Astrophysics*, Vol. 58, pp. 1–16, 1977.
- [83] Lundberg, J., and B. Schutz, "Recursion formulas of Legendre functions for use with nonsingular geopotential models," *J. Guid. Cont. Dyn.*, Vol. 11, No. 1, pp. 31–38, January–February 1988.
- [84] Lutchke, S. B., N. P. Zelenski, D. D. Rowlands, F. G. Lemoine, and T. A. Williams, "The 1-centimeter orbit: Jason-1 precision orbit determination using GPS, SLR, DORIS and altimeter data," *Marine Geodesy*, Vol. 26, No. 3-4, pp. 399–421, 2003.
- [85] Marini, J. W., and C. W. Murray, "Correction of laser range tracking data for atmospheric refraction at elevations above 10 degrees," NASA GSFC X591-73-351, Greenbelt, MD, 1973.
- [86] Markov, A. A., "The law of large numbers and the method of Least Squares," (1898), *Izbr. Trudi., Izd. Akod. Nauk*, USSR, pp. 233-251, 1951.
- [87] Marshall, J. A., F. J. Lerch, S. B. Luthcke, R. G. Williamson, and C. Chan, "An Assessment of TDRSS for Precision Orbit Determination," *J. Astonaut. Sci*, Vol. 44, No. 1, pp. 115–127, January–March, 1996.

[88] Marshall, J. A., N. P. Zelensky, S. M. Klosko, D. S. Chinn, S. B. Luthcke, K. E. Rachlin, and R. G. Williamson, "The temporal and spatial characteristics of TOPEX/Poseidon radial orbit error," *J. Geophys. Res.*, Vol. 99, No. C12, pp. 25,331–25,352, December 15, 1995.

- [89] Maybeck, P. S., Stochastic Models, Estimation and Control, Vol. 1, Academic Press, 1979.
- [90] McCarthy, D. (ed.), *IERS Conventions* (1996), IERS Technical Note 21, International Earth Rotation Service, Observatoire de Paris, July 1996.
- [91] Mikhail, E. M., *Observations and Least Squares*, University Press of America, Lanham, MD, 1976.
- [92] Mohr, P. J., and B. Taylor, "The fundamental physical constants," *Physics Today*, Vol. 56, No. 8, Supplement, pp. BG6–BG13, August 2003.
- [93] Moler, C., and C. Van Loan, "Nineteen dubious ways to compute the exponential of a matrix," *SIAM Review*, Vol. 20, No. 4, pp. 801–836, October 1978.
- [94] Montenbruck, O., and E. Gill, *Satellite Orbits: Models, Methods, and Applications*, Springer-Verlag, Berlin, 2001.
- [95] Moritz, H., and I. Mueller, *Earth Rotation: Theory and Observation*, Ungar Publishing Company, New York, 1987.
- [96] Moulton, F. R., An Introduction to Celestial Mechanics, MacMillan Co., New York, 1914.
- [97] Myers, K. A., Filtering theory methods and applications to the orbit determination problem for near-Earth satellites, Ph.D. Dissertation, The University of Texas at Austin, November 1973.
- [98] Newton, I., *Philosophiae Naturalis Principia Mathematica*, 1687 (translated into English: A. Motte, 1729; revised by F. Cajori, University of California Press, 1962).
- [99] Papoulis, A., *Probability, Random Variables, and Stochastic Processes*, McGraw-Hill, New York, 1991.
- [100] Parkinson, B., J. Spilker, P. Axelrad, and P. Enge (eds.), *Global Positioning System: Theory and Applications*, Vols. 1–3, American Institute of Aeronautics and Astronautics, Inc., Washington, DC, 1966.
- [101] Pines, S., "Uniform representation of the gravitational potential and its derivatives," *AIAA J.*, Vol. 11, No. 11, pp. 1508–1511, November 1973.

[102] Plummer, H. C., An Introductory Treatise on Dynamical Astronomy, Cambridge University Press, 1918 (republished by Dover Publications, New York, 1966).

- [103] Pollard, H., *Mathematical Introduction to Celestial Mechanics*, Prentice-Hall, Inc., Englewood Cliffs, NJ, 1966.
- [104] Press, W., B. Flannery, S. Teukolsky, and W. Vetterling, *Numerical Recipes*, Cambridge University Press, Cambridge, 1986.
- [105] Prussing, J., and B. Conway, *Orbit Mechanics*, Oxford University Press, New York, 1993.
- [106] Rausch, H. E., F. Tung, and C. T. Striebel, "Maximum likelihood estimates of linear dynamic systems," *AIAA J.*, Vol. 3, No. 7, pp. 1445–1450, August 1965.
- [107] Reddy, J. N., and M. L. Rasmussen, *Advanced Engineering Analysis*, Robert E. Krieger Publishing Co., Malabar, FL 1990.
- [108] Ries, J. C., C. Huang, M. M. Watkins, and B. D. Tapley, "Orbit determination in the relativistic geocentric reference frame," *J. Astronaut. Sci.*, Vol. 39, No. 2, pp. 173–181, April–June 1991.
- [109] Ries, J. C., C. K. Shum, and B. Tapley, "Surface force modeling for precision orbit determination," *Geophysical Monograph Series*, Vol. 73, A. Jones (ed.), American Geophysical Union, Washington, DC, 1993.
- [110] Rowlands, D. D., S. B. Luthcke, J. A. Marshall, C. M. Cox, R. G. Williamson, and S. C. Rowton, "Space Shuttle precision orbit determination in support of SLA-1 using TDRSS and GPS tracking data," *J. Astronaut. Sci.*, Vol. 45, No. 1, pp. 113–129, January–March 1997.
- [111] Roy, A. E., Orbital Motion, John Wiley & Sons Inc., New York, 1988.
- [112] Saastamoinen, J., "Atmospheric correction for the troposphere and stratosphere in radio ranging of satellites," *Geophysical Monograph Series, Vol.* 15, S. Henriksen, A. Mancini, and B. Chovitz (eds.), American Geophysical Union, Washington, DC, pp. 247–251, 1972.
- [113] Schaub, H., and J. Junkins, *Analytical Mechanics of Space Systems*, American Institute of Aeronautics and Astronautics, Reston, VA, 2003.
- [114] Schlee, F. H., C. J. Standish, and N. F. Toda, "Divergence in the Kalman filter," *AIAA J.*, Vol. 5, No. 6, pp. 1114–1120, June 1967.

[115] Schutz, B., B. D. Tapley, P. Abusali, H. Rim, "Dynamic orbit determination using GPS measurements from TOPEX/Poseidon," *Geophys. Res. Ltrs.*, Vol. 21, No. 19, pp. 2179–2182, 1994.

- [116] Seeber, G., Satellite Geodesy: Foundations, Methods & Applications, Walter de Gruyter, New York, 1993.
- [117] Seidelmann, P. K., "1980 IAU Nutation: The Final Report of the IAU Working Group on Nutation", *Celest. Mech.*, Vol. 27, No. 1, pp. 79–106, 1982.
- [118] Seidelmann, P. K. (ed.), Explanatory Supplement to the Astronomical Almanac, University Science Books, Mill Valley, CA, 1992.
- [119] Shampine, L., and M. Gordon, *Computer Solution of Ordinary Differential Equations, The Initial Value Problem*, W. H. Freeman and Co., San Francisco, 1975.
- [120] Shum, C. K., B. Zhang, B. Schutz, and B. Tapley, "Altimeter crossover methods for precise orbit determination and the mapping of geophysical parameters," *J. Astronaut. Sci.*, Vol. 38, No. 3, pp. 355–368, July–September 1990.
- [121] Simon, J. L., P. Bretagnon, J. Chapront, M. Chapront-Touzé, G. Francou, J. Laskar, "Numerical expressions for precession formulae and mean elements for the Moon and planets," *Astronomy and Astrophysics*, Vol. 282, pp. 663–683, 1994.
- [122] Skolnik, M.I. (ed.), Radar Handbook, McGraw-Hill, New York, 1990.
- [123] Smart, W. M., Celestial Mechanics, John Wiley & Sons Inc., New York, 1961.
- [124] Sorenson, H. W., "Least squares estimation: from Gauss to Kalman," *IEEE Spectrum*, Vol. 7, No. 7, pp. 63–68, July, 1970.
- [125] Sorenson, H. W. (ed.), Kalman Filtering: Theory and Applications, IEEE Press, 1985.
- [126] Standish, E. M., X. Newhall, J. Williams, and W. Folkner, *JPL Planetary and Lunar Ephemerides* (CD-ROM), Willmann-Bell, Inc., Richmond, VA 1997.
- [127] Swerling, P., "First order error propagation in a stagewise differential smoothing procedure for satellite observations," *J. Astronaut. Sci.*, Vol. 6, pp. 46–52, 1959.

- [128] Szebehely, V., Theory of Orbits, Academic Press, New York, 1967.
- [129] Szebehely, V., and H. Mark, *Adventures in Celestial Mechanics*, John Wiley & Sons, Inc., New York, 1998.
- [130] Tapley, B. D., "Statistical orbit determination theory," in *Recent Advances in Dynamical Astronomy*, B. D. Tapley and V. Szebehely (eds.), D. Reidel, pp. 396–425, 1973.
- [131] Tapley, B. D., "Fundamentals of orbit determination", in *Theory of Satellite Geodesy and Gravity Field Determination*, Vol. 25, pp. 235-260, Springer-Verlag, 1989.
- [132] Tapley, B. D., and C. Y. Choe, "An algorithm for propagating the square root covariance matrix in triangular form," *Trans. Auto. Cont.*, Vol. AC-21, pp. 122–123, 1976.
- [133] Tapley, B. D., and D. S. Ingram, "Orbit determination in the presence of unmodeled accelerations," *Trans. Auto. Cont.*, Vol. AC-18, No. 4, pp. 369–373, August 1973.
- [134] Tapley, B. D., and J. G. Peters, "A sequential estimation algorithm using a continuous UDU^T covariance factorization," *J. Guid. Cont.*, Vol. 3, No. 4, pp. 326–331, July–August 1980.
- [135] Tapley, B. D., J. Ries, G. Davis, R. Eanes, B. Schutz, C. Shum, M. Watkins, J. Marshall, R. Nerem, B. Putney, S. Klosko, S. Luthcke, D. Pavlis, R. Williamson, and N. P. Zelensky, "Precision orbit determination for TOPEX/Poseidon," *J. Geophys. Res.*, Vol. 99, No. C12, pp. 24,383–24,404, December 15, 1994.
- [136] Tapley, B. D., M. Watkins, J. Ries, G. Davis, R. Eanes, S. Poole, H. Rim, B. Schutz, C. Shum, R. Nerem, F. Lerch, J. Marshall, S. Klosko, N. Pavlis, and R. Williamson, "The Joint Gravity Model 3," *J. Geophys. Res.*, Vol. 101, No. B12, pp. 28,029–28,049, December 10, 1996.
- [137] Thompson, B., M. Meek, K. Gold, P. Axelrad, G. Born, and D. Kubitschek, "Orbit determination for the QUIKSCAT spacecraft," *J. Spacecr. Rockets*, Vol. 39, No. 6, pp. 852–858, November–December 2002.
- [138] Thornton, C. L., *Triangular covariance factorizations for Kalman filtering*, Technical Memorandum, 33–798, Jet Propulsion Laboratory, Pasadena, CA, October 15, 1976.
- [139] Torge, W., *Geodesy*, Walter de Gruyter, Berlin, 1980 (translated to English: Jekeli, C.).

[140] Vallado, D., Fundamentals of Astrodynamics and Applications, Space Technology Library, Microcosm Press, El Segundo, CA, 2001.

- [141] Vigue, Y., B. Schutz, and P. Abusali, "Thermal force modeling for the Global Positioning System satellites using the finite element method," *J. Spacecr. Rockets*, Vol. 31, No. 5, pp. 866–859, 1994.
- [142] Visser, P., and B. Ambrosius, "Orbit determination of TOPEX/Poseidon and TDRSS satellites using TDRSS and BRTS tracking," *Adv. Space Res.*, Vol. 19, pp. 1641–1644, 1997.
- [143] Wahr, J. M., "The forced nutations of an elliptical, rotating, elastic, and oceanless Earth," *Geophys. J. of Royal Astronom. Soc.*, 64, pp. 705–727, 1981.
- [144] Walpole, R. E., R. H. Myers, S. L. Myers, and Y. Keying, *Probability and Statistics for Engineers and Scientists*, Prentice Hall, Englewood Cliffs, NJ, 2002.
- [145] Webb, C., The ICRF-ITRF Transformation: A Comparison of Fundamental Earth Orientation Models found in MSODP and CALC, The University of Texas at Austin, Center for Space Research Report CSR-02-01, Austin, TX, 2002.
- [146] Wells, D., *Guide GPS Positioning*, Canadian GPS Associates, Fredericton, 1987.
- [147] Westfall, R., Never at Rest: A Biography of Isaac Newton, Cambridge University Press, Cambridge, 1980.
- [148] Wiener, N., The Extrapolation, Interpolation and Smoothing of Stationary Time Series, John Wiley & Sons, Inc., New York, 1949.
- [149] Wiesel, W. E., Spaceflight Dynamics, McGraw-Hill, 1997.
- [150] Woolard, E., Theory of the rotation of the Earth around its center of mass, Astronomical Papers—American Ephemeris and Nautical Almanac, Vol. XV, Part I, U.S. Naval Observatory, Washington, DC, 1953.