

## References

- [1] Alligood, K.T., Sauer, T.D., and Yorke, J.A., *Chaos. An Introduction to Dynamical Systems*, Springer-Verlag, New York, 1997.
- [2] Apostol, T.M., *Calculus*, Blaisdell Publishing Co., Waltham, Mass., 1967–69.
- [3] Baker, G.A., Jr., and Graves–Morris, P., *Padé Approximants*, Encyclopedia of Mathematics and Its Applications, v. 59, Cambridge University Press, Cambridge, 1996.
- [4] Birkhoff, G., and Rota, G.–C., *Ordinary Differential Equations*, Blaisdell Publ. Co., Waltham, Mass., 1962.
- [5] Bradie, B., *A Friendly Introduction to Numerical Analysis*, Prentice–Hall, Inc., Upper Saddle River, N.J., 2006.
- [6] Bronstein, M., and Lafaille, S., Solutions of linear ordinary differential equations in terms of special functions, in: *Proceedings of the 2002 International Symposium on Symbolic and Algebraic Computation*, T. Mora, ed., ACM, New York, 2002, pp. 23–28.
- [7] Burden, R.L., and Faires, J.D., *Numerical Analysis*, Seventh Edition, Brooks/Cole, Pacific Grove, CA, 2001.
- [8] Cantwell, B.J., *Introduction to Symmetry Analysis*, Cambridge University Press, Cambridge, 2003.
- [9] Clenshaw, C.W., and Olver, F.W.J., Beyond floating point, *J. Assoc. Comput. Mach.* **31** (1984), 319–328.
- [10] Courant, R., and Hilbert, D., *Methods of Mathematical Physics*, vol. I, Interscience Publ., New York, 1953.
- [11] Davidson, K.R., and Donsig, A.P., *Real Analysis with Real Applications*, Prentice–Hall, Inc., Upper Saddle River, N.J., 2002.
- [12] DeGroot, M.H., and Schervish, M.J., *Probability and Statistics*, 3rd ed., Addison–Wesley, Boston, 2002.
- [13] Demmel, J.W., *Applied Numerical Linear Algebra*, SIAM, Philadelphia, PA, 1997.
- [14] Devaney, R.L., *An Introduction to Chaotic Dynamical Systems*, Addison–Wesley, Redwood City, Calif., 1989.
- [15] Farin, G.E., *Curves and Surfaces for CAD: A Practical Guide*, Academic Press, London, 2002.
- [16] Feigenbaum, M.J., Qualitative universality for a class of nonlinear transformations, *J. Stat. Phys.* **19** (1978), 25–52.
- [17] Fine, B., and Rosenberger, G., *The Fundamental Theorem of Algebra*, Undergraduate Texts in Mathematics, Springer–Verlag, New York, 1997.
- [18] Francis, J.G.F., The  $QR$  transformation I, II, *Comput. J.* **4** (1961–2), 265–271, 332–345.
- [19] Gaal, L., *Classical Galois theory*, 4th ed., Chelsea Publ. Co., New York, 1988.
- [20] Gohberg, I., and Koltracht, I., Triangular factors of Cauchy and Vandermonde matrices, *Integral Eq. Operator Theory* **26** (1996), 46–59.

- [21] Hairer, E., Nørsett, S.P., and Wanner, G., *Solving Ordinary Differential Equations*, 2nd ed., Springer–Verlag, New York, 1993–1996.
- [22] Hale, J.K., *Ordinary Differential Equations*, Second Edition, R. E. Krieger Pub. Co., Huntington, N.Y., 1980.
- [23] Hamming, R.W., *Numerical Methods for Scientists and Engineers*, McGraw–Hill, New York, 1962.
- [24] Higham, N.J., *Accuracy and Stability of Numerical Algorithms*, Second Edition, SIAM, Philadelphia, 2002.
- [25] Hirsch, M.W., and Smale, S., *Differential Equations, Dynamical Systems, and Linear Algebra*, Academic Press, New York, 1974.
- [26] Hydon, P.E., *Symmetry Methods for Differential Equations*, Cambridge Texts in Appl. Math., Cambridge University Press, Cambridge, 2000.
- [27] Ince, E.L., *Ordinary Differential Equations*, Dover Publ., New York, 1956.
- [28] Iserles, A., *A First Course in the Numerical Analysis of Differential Equations*, Cambridge University Press, Cambridge, 1996.
- [29] Jolliffe, I.T., *Principal Component Analysis*, 2nd ed., Springer–Verlag, New York, 2002.
- [30] Krall, A.M., *Applied Analysis*, D. Reidel Publishing Co., Boston, 1986.
- [31] Kublanovskaya, V.N., On some algorithms for the solution of the complete eigenvalue problem, *USSR Comput. Math. Math. Phys.* **3** (1961), 637–657.
- [32] Lanford, O., A computer-assisted proof of the Feigenbaum conjecture, *Bull. Amer. Math. Soc.* **6** (1982), 427–434.
- [33] Mandelbrot, B.B., *The Fractal Geometry of Nature*, W.H. Freeman, New York, 1983.
- [34] Marsden, J.E., and Tromba, A.J., *Vector Calculus*, 4th ed., W.H. Freeman, New York, 1996.
- [35] Moon, F.C., *Chaotic Vibrations*, John Wiley & Sons, New York, 1987.
- [36] Olver, F.W.J., *Asymptotics and Special Functions*, Academic Press, New York, 1974.
- [37] Olver, P.J., *Applications of Lie Groups to Differential Equations*, 2nd ed., Graduate Texts in Mathematics, vol. 107, Springer–Verlag, New York, 1993.
- [38] Olver, P.J., and Shakiban, C., *Applied Linear Algebra*, Prentice–Hall, Inc., Upper Saddle River, N.J., 2005.
- [39] Olver, P.J., and Shakiban, C., *Applied Mathematics*, Prentice–Hall, Inc., Upper Saddle River, N.J., to appear.
- [40] Ortega, J.M., *Numerical Analysis; A Second Course*, Academic Press, New York, 1972.
- [41] Orucc, H., and Phillips, G. M., Explicit factorization of the Vandermonde matrix, *Linear Algebra Appl.* **315** (2000), 113–123.
- [42] Peitgen, H.-O., and Richter, P.H., *The Beauty of Fractals: Images of Complex Dynamical Systems*, Springer–Verlag, New York, 1986.
- [43] Press, W.H., Teukolsky, S.A., Vetterling, W.T., and Flannery, B.P., *Numerical Recipes in C: The Art of Scientific Computing*, 2nd ed., Cambridge University Press, Cambridge, 1995.
- [44] Schumaker, L.L., *Spline Functions: Basic Theory*, John Wiley & Sons, New York, 1981.
- [45] Strang, G., and Fix, G.J., *An Analysis of the Finite Element Method*, Prentice–Hall, Inc., Englewood Cliffs, N.J., 1973.
- [46] Tannenbaum, P., *Excursions in Modern Mathematics*, 5th ed., Prentice–Hall, Inc., Upper Saddle River, N.J., 2004.
- [47] Varga, R.S., *Matrix Iterative Analysis*, 2nd ed., Springer–Verlag, New York, 2000.

- [48] Watkins, D.S., *Fundamentals of Matrix Computations*, Second Edition,, Wiley-Interscience, New York, 2002.
- [49] Zienkiewicz, O.C., and Taylor, R.L., *The Finite Element Method*, 4th ed., McGraw-Hill, New York, 1989.