

# References

1. Tom. M. Apsotol. *Mathematical Analysis*. Addison-Wesley, Reading, MA, 1974.
2. N. Aubry, R. Guyonnet, and R. Lima. Spatio-temporal symmetries and bifurcations via bi-orthogonal decomposition. *Journal of Nonlinear Science*, 2:183–215, 1992.
3. Andrew R. Barron. Universal approximation bounds for superpositions of a sigmoidal function. *IEEE Transactions on Neural Networks*, 39(3):930–945, 1993.
4. Andrew R. Barron. Approximation and estimation bounds for artificial neural networks. *Machine Learning*, 14:115–133, 1994.
5. D. S. Broomhead, R. Jones, and G. P. King. Topological dimension and local coordinates from time series data. *J. Phys. A: Math. Gen*, 20:L563–L569, 1987.
6. D.S. Broomhead, R. Indik, A.C. Newell, and D.A. Rand. Local adaptive Galerkin bases for large-dimensional dynamical systems. *Nonlinearity*, 4:159–197, 1991.
7. D.S. Broomhead and David Lowe. Multivariable functional interpolation and adaptive networks. *Complex Systems*, 2:321–355, 1988.

8. C. Canuto, M.Y. Hussaini, A. Quarteroni, and T.A. Zang. *Spectral Methods in Fluid Dynamics*. Springer Series in Computational Physics. Springer-Verlag, 1988.
9. Ingrid Daubechies. *Ten Lectures on Wavelets*. CBMS-NSF Regional Conference Series in Applied Mathematics. SIAM, Philadelphia, PA, 1992.
10. P.A. Devijver and J. Kittler. *Pattern Recognition: A Statistical Approach*. Prentice Hall, 1982.
11. Richard O. Duda and Peter E. Hart. *Pattern Classification and Scene Analysis*. John Wiley and Sons, New York, 1973.
12. Kenneth Falconer. *Fractal Geometry: Mathematical Foundations and Applications*. John Wiley and Sons, 1990.
13. K. Fukunaga. *Introduction to Statistical Pattern Recognition*. Academic Press, Boston, MA, 1990.
14. K. Fukunaga and D.R. Olsen. An algorithm for finding intrinsic dimensionality of data. *IEEE Transactions on Computers*, C-20(2):176–183, 1971.
15. Gene H. Golub and Charles F. Van Loan. *Matrix Computations*. Johns Hopkins, Baltimore, third edition, 1996.
16. A. Grossmann, R. Kronland-Martinet, and J. Morlet. Reading and understanding the continuous wavelet transforms. In J.M. Combes, A. Grossmann, and Ph. Tchamitchian, editors, *Wavelets*, pages 2–20, Berlin, 1989. Springer Verlag.
17. V. Guillemin and A. Pollack. *Differential Topology*. Prentice Hall, Englewood Cliffs, NJ, 1974.
18. Morris W. Hirsch. *Differential Topology*. Graduate Texts in Mathematics 33. Springer-Verlag, 1976.
19. K. Hoffman and R. Kunze. *Linear Algebra*. Prentice Hall, New Jersey, 1971.
20. R.A. Horn and C.R. Johnson. *Matrix Analysis*. Cambridge University Press, Cambridge, England, 1985.
21. R.A. Horn and C.R. Johnson. *Topics in Matrix Analysis*. Cambridge University Press, Cambridge, England, 1991.
22. H. Hotelling. Analysis of a complex of statistical variables into principal components. *Journal of Educational Psychology*, September, 1933.
23. Witold Hurewicz and Henry Wallman. *Dimension Theory*. Princeton University Press, Princeton, 1948.

24. I.T. Jolliffe. *Principal Component Analysis*. Springer, New York, 1986.
25. M. Kirby and L. Sirovich. Application of the Karhunen-Loève procedure for the characterization of human faces. *IEEE trans. PAMI*, 12(1):103–108, 1990.
26. M. Kirby, F. Weisser, and G. Dangelmayr. A problem in facial animation: Analysis and synthesis of lip motion. In *Proc. of the 7th Scandinavian Conf. on Image Analysis*, pages 529–536, Aalborg, Denmark, 1991.
27. M. Kirby, Frank Weisser, and G. Dangelmayr. Speaking with images: a model problem in the representation of still and moving images. *Pattern Recognition*, 26(1):63–73, 1993.
28. T. Kohonen. *Self-organization and Associative Memory*. Springer-Verlag, Berlin, 1984.
29. L.D. Landau and E.M. Lifshitz. *Fluid Mechanics*. Pergamon Press, New York, 1959.
30. S. Lang. *Linear Algebra*. Springer, New York.
31. M. Loève. *Probability Theory*. von Nostrand, Princeton, N.J., 1955.
32. E. Lorenz. Empirical orthogonal eigenfunctions and statistical weather prediction. Science Report No. 1, Statistical Forecasting Project 1, M.I.T., Cambridge, MA, 1956.
33. N.H. Packard, J.P. Crutchfield, J.D. Farmer, and R.S. Shaw. Geometry from a time series. *Physical Review Letters*, 45:712–716, 1980.
34. Athanasios Papoulis. *The Fourier Integral and Its Applications*. McGraw Hill Electronic Science Series. McGraw Hill, New York, 1962.
35. Karl Pearson. On lines and planes of closest fit to systems of points in space. *Phil. Mag. S.*, 2(11):559–572, 1901.
36. M.J.D. Powell. *Approximation Theory and Methods*. Cambridge University Press, Cambridge, England, 1981.
37. Riesz and Sz.-Nagy. *Functional Analysis*. Dover, reprinted 1990.
38. Tim Sauer, James A. Yorke, and Martin Casdagli. Embedology. *Journal of Statistical Physics*, 65(3/4):579–616, 1991.
39. L. Sirovich and M. Kirby. A low-dimensional procedure for the characterization of human faces. *J. of the Optical Society of America A*, 4:529–524, 1987.
40. G. Strang. *Linear Algebra and its Applications*. Academic Press, 1980.

41. F. Takens. Detecting strange attractors in turbulence. In D.A. Rand and L.-S. Young, editors, *Dynamical Systems and Turbulence*, volume 898 of *Lecture Notes in Mathematics*, pages 366–381, Warwick 1980, 1981. Springer-Verlag, Berlin.
42. Lloyd N. Trefethen and III David Bau. *Numerical Linear Algebra*. SIAM, Philadelphia, PA, 1997.
43. S. Watanabe. Karhunen-loève expansion and factor analysis. In *Trans. 4th. Prague Conf. on Inf. Theory, Stat. Decision Functions, and Random Proc.*, pages 635–660, Prague, 1965.