

REFERENCES

- [1] Reifsnider, K.L. (ed.), *Fatigue of Composite Materials*, Elsevier, Amsterdam, 1991.
- [2] Aymerich, F., Serra, M., "Prediction of Fatigue Strength of Composite Laminates by Means of Neural Networks," *Key Engineering Materials*, Vol. 144, 1998, pp. 231-240.
- [3] Lee, J.A., Almond, D.P., "A Neural-Network Approach to Fatigue Life Prediction," *Fatigue in Composites*, edited by B. Harris, Woodhead Publishing Ltd, Cambridge, England, UK, 2003, pp. 569-589.
- [4] Tanimoto, S.L., *The Elements of Artificial Intelligence Using Common LISP*, Computer Science Press, New York, 1990.
- [5] Bonnet, A., *Artificial Intelligence, Promise and Performance*, Prentice-Hall, Englewood Cliffs, NJ, 1985.
- [6] Eeckman, F.H. (ed.), *Analysis and Modeling of Neural Systems*, Kluwer Academic, Boston, 1992.
- [7] <http://www.virtualventures.ca/~neil/neural/neuron-a.html> [cited 17 May 2007].
- [8] Haykin, S., *Neural Networks: A Comprehensive Foundation*, Macmillan, New York, 1994.
- [9] Hagan, M.T. and Demuth, H.B., *Neural Network Design*, PWS Publishing Company, New York, 1996.
- [10] DOE/MSU Composite Material Fatigue Database, Montana State University, 2007.
- [11] Wilson, T.J., "Modeling of In-Plane and Interlaminar Fatigue Behavior of Glass and Carbon Fiber Composite Materials," M.Sc. Thesis, Dept. of Mechanical Engineering, Montana State University, Bozeman, 2007.
- [12] Mandell J.F., Samborsky D.D., "DOE/MSU Composite Material Fatigue Database: Test, Methods, Material and Analysis", SAND97-3002, Sandia National Laboratories, 1997.
- [13] Jen, M.-H.R., Tseng, Y.C., and Lin, W. H., "Thermo-mechanical Fatigue of Centrally Notched and Unnotched AS-4/PEEK APC-2 Composite Laminates," *International Journal of Fatigue*, Vol. 28, No. 8, 2006, pp. 901-909.
- [14] Lee, C.-H., Jen, M.-H.R., "Fatigue Response and Modeling of Variable Stress Amplitude and Frequency in AS-4/PEEK Composite Laminates, Part 1: Experiments" *Journal of Composites Materials*, Vol. 34, No. 11, 2000, pp. 906-929.

- [15] Tai, N.H., Ma, C.C., and Wu, S. H., "Fatigue Behaviour of Carbon Fibre/PEEK Laminate Composites," *Composites*, Vol. 26, No. 8, 1995, pp. 551-559.
- [16] Xiao, X.R., Al-Hmouz, I., "Fatigue Behaviour of Angle-Ply AS4/PEEK Composite," *Progress in Durability Analysis of Composite Systems*, edited by Kenneth L. Reifsnider, David A. Dillard and Albert H. Cardon, A.A.Balkema, Rotterdam, Netherlands, 1998, pp. 331-338.
- [17] Gamstedt, E.K., "Fatigue in Composite Laminates-A Qualitative Link from Micromechanisms to Fatigue Life Performance," *Recent Developments in Durability Analysis of Composite Systems*, edited by Albert H. Cardon, Hiroshi Fukuda, Kenneth L. Reifsnider and Georges Verchery, A.A.Balkema, Rotterdam, Netherlands, 2000, pp. 87-100.
- [18] Diao, X., Ye, L., and Mai, Y-W., "A Statistical Study of The Fatigue Performance of Fibre-Reinforced Composite Laminates," *Fatigue in Composites*, edited by B. Harris, Woodhead Publishing Ltd, Cambridge, England, UK, 2003, pp. 442-469.
- [19] Al-Assaf, Y., El-Kadi, H., "Fatigue Life Prediction of Unidirectional Glass Fiber/Epoxy Composite Laminae Using Neural Networks," *Composites Structures*, Vol. 53, No. 1, 2001, pp. 65-71.
- [20] El-Kadi, H., Al-Assaf, Y., "Prediction of The Fatigue Life of Unidirectional Glass Fiber/Epoxy Composite Laminae Using Different Neural Network Paradigms," *Composites Structures*, Vol. 55, No. 1, 2002, pp. 239-246.
- [21] Freire Junior, R.C.S., Neto, A.D.D., and de Aquino, E.M.F., "Building of Constant Life Diagrams of Fatigue Using Artificial Neural Networks," *International Journal of Fatigue*, Vol. 27, No. 7, 2005, pp. 746-751.
- [22] Vassilopoulos, A.P., Georgopoulos, E.F., and Dionysopoulos, V., "Artificial Neural Networks in Spectrum Fatigue Life Prediction of Composite Materials," *International Journal of Fatigue*, Vol. 29, No. 1, 2007, pp. 20-29.
- [23] Freire Junior, R.C.S., Neto, A.D.D., and de Aquino, E.M.F., "Use of Modular Networks in The Building of Constant Life Diagrams," *International Journal of Fatigue*, Vol. 29, No. 3, 2007, pp. 389-396.
- [24] Zhang, Z., Friedrich, K., "Artificial Neural Networks Applied to Polymer Composites: A Review," *Composites Science and Technology*, Vol. 63, No. 14, 2003, pp. 2029-2044.
- [25] Vasiliev, V.V., and Morozov, E.V., *Mechanics and Analysis of Composite Material*, Elsevier Science Ltd, Oxford, UK, 2001.

- [26] Rogers, C.A. (ed.), *Smart Materials, Structures and Mathematical Issues*, Technomic Pub. Co., Lancaster, 1988.
- [27] Mazumdar, S.K., *Composites Manufacturing-Materials, Product and Process Engineering*, CRC Press LLC, Florida, USA, 2002.
- [28] Kollar, L.P., and Springer, G.S., *Mechanics of Composite Structures*, Cambridge University Press, Cambridge, 2003.
- [29] Stephens, R.I., Fatemi, A., Stephens, R.R., Fuchs, H.O., *Metal Fatigue in Engineering*, 2nd ed., Wiley-Interscience New York, 2006.
- [30] Talreja, R., *Fatigue of Composite Materials*, Technomic Publishing Company, Inc., Pennsylvania, USA, 1987.
- [31] Attia, O., Kinloch, A.J., and Matthews, F.L., "Modelling The Fatigue Life of Polymer-Matrix Fibre-Composite Components," *Composites Science and Technology*, Vol. 61, No. 15, 2001, pp. 2273-2283.
- [32] Kachanov, L.M., *Delamination Buckling of Composite Materials*, Kluwer Academic Publishers, The Netherlands, 1988.
- [33] Reifsnider, K., Case, S., and Duthoit, J., "The Mechanics of Composite Strength Evolution," *Composites Science and Technology*, Vol. 60, No. 12, 2000, pp. 2539-2546.
- [34] Wahl, N.K., "Spectrum Fatigue Lifetime and Residual Strength for Fiberglass Laminates," Ph.D. Thesis, Department of Mechanical Engineering, Montana State University, Bozeman, 2001.
- [35] Kawai, M., Yajima, S., Hachinohe, A., and Takano, Y., "Off-Axis Fatigue Behavior of Unidirectional Carbon Fiber-Reinforced Composites at Room and High Temperatures," *Journal of Composites Materials*, Vol. 35, No. 7, 2001, pp. 545-576.
- [36] Kawai, M., and Suda, H., "Effects of Non-Negative Mean Stress on the Off-Axis Fatigue Behavior of Unidirectional Carbon Fiber-Reinforced Composites at Room Temperature," *Journal of Composites Materials*, Vol. 38, No. 10, 2004, pp. 833-853.
- [37] Xiao, X.R., "Modeling of Load Frequency Effect on Fatigue Life of Thermoplastic Composites," *Journal of Composites Materials*, Vol. 33, No. 12, 1999, pp. 1141-1158.

- [38] Michel, S.A., Kieselbach, R., and Martens, H. J., “Fatigue Strength of Carbon Fibre Composites up to The Gigacycle Regime (Gigacycle-Composites),” *International Journal of Fatigue*, Vol. 28, No. 3, 2006, pp. 261-270.
- [39] Mandell, J.F., “Fatigue Behavior of Short Fiber Composite Materials,” *Fatigue of Composite Materials*, edited by K.L. Reifsnider, Elsevier, Amsterdam, 1991.
- [40] Vassilopoulos, A.P., and Philippidis, T.P., “Complex Stress State Effect on Fatigue Life of GRP Laminates. Part I, experimental,” *International Journal of Fatigue*, Vol. 24, No. 8, 2002, pp. 813-823.
- [41] Lee, Y.L., Pan, J., Hathaway, R.B., Barkey, M.E., *Fatigue Testing and Analysis: Theory and Practice*, Elsevier Butterworth–Heinemann, USA, 2005.
- [42] Department of Defense Handbook MIL-HDBK-17, *Polymer Matrix Composites, Volume 1-Guidelines for Characterization of Structural Materials*, U.S. Department of Defense, 1997, Chap. 8.
- [43] Klemenc, J., Fajdiga, M., “Prediction of Loading Spectra Under Diverse Operating Conditions by A Localised Basis Function Neural Network,” *International Journal of Fatigue*, Vol. 27, No. 5, 2005, pp. 555-568.
- [44] Harris, B., “A Parametric Constant-Life Model for Prediction of The Fatigue Lives of Fiber-Reinforced Plastics,” *Fatigue in Composites*, edited by B. Harris, Woodhead Publishing Ltd, Cambridge, England, UK, 2003, pp. 546-568.
- [45] Schaff, J.R., Davidson, B.D., “Life Prediction Methodology for Composite Structures. Part I—Constant Amplitude and Two-Stress Level Fatigue,” *Journal of Composites Materials*, Vol. 31, No. 2, 1997, pp. 128-157.
- [46] Schaff, J.R., Davidson, B.D., “Life Prediction Methodology for Composite Structures. Part II—Spectrum Fatigue,” *Journal of Composites Materials*, Vol. 31, No. 2, 1997, pp. 158-181.
- [47] *DARPA Neural Network Study*, Lexington, MA: M.I.T. Lincoln Laboratory, 1988.
- [48] Rabunal, J.R., and Dorado, J., *ANN in Real Life Applications*, Idea Group, Inc., USA, 2006.
- [49] Gupta, M.M., Jin, L., and Homma, N., *Statics and Dynamics Neural Networks-From Fundamentals to Advanced Theory*, John Wiley & Sons, Inc., New Jersey, 2003.
- [50] Mandic, D., and Chambers, J., *Recurrent Neural Networks for Prediction*, John Wiley & Sons, Inc., West Sussex, England, 2001.

- [51] Haykin, S., (Ed.), *Kalman Filtering and Neural Networks*, John Wiley & Sons, Inc., New York, USA, 2001.
- [52] Dreyfus, G., *Neural Networks-Methodology and Applications*, Springer, Heidelberg, Germany, 2005.
- [53] Tirozzi, B., Puca, S., Pittalis, S., Bruschi, A., Morucci, S., Ferraro, E., and Corsini, S., *Neural Networks and Sea Times Series*, Springer, Boston, 2006.
- [54] Ablameyko, S., Goras, L., Gori, M., and Piuri, V., *Neural Networks for Instrumentation, Measurement and Related Industrial Applications*, IOS Press, Crema, Italy, 2003.
- [55] Tang, H., Tan, K.C., and Yi, Z., *Neural Networks: Computational Models and Applications*, Springer, Heidelberg, 2007.
- [56] Freeman, J.A., and Skapura, D.M., *Neural Networks-Algorithms, Applications and Programming Techniques*, Addison-Wesley Publishing Company, Inc., Massachusetts, 1991.
- [57] Lisboa, P.J.G., “Industrial Use of Safety-Related Artificial Neural Networks”, Contract Research Report No. 327, Liverpool John Moores University, 2001.
- [58] Rumelhart, D. E., and McClelland, J. L., *Parallel Distributed Processing: Explorations in The Microstructure of Cognition*, MIT Press, Cambridge, 1986.
- [59] Neural Network Toolbox 5 User’s Guide.
- [60] Nocedal, J., and Wright, S.J., *Numerical Optimization*, 2nd ed., Springer, New York, 2006, Chap. 10.
- [61] Fletcher, R., *Practical Methods of Optimization*, John Wiley & Sons, Ltd., USA, 1980.
- [62] Bishop, C.M., *Neural Networks for Pattern Recognition*, Clarendon, Oxford, 1995.
- [63] Foresee, F.D., Hagan, M.T., “Gauss-Newton Approximation to Bayesian Learning”, *IEEE International Conference on Neural Networks*, Vol. 3, No. 8, pp. 1930-1935, 1997.
- [64] Fonseca, D.J., Navarrese, D.O., and Moynihan, G.P., “Simulation Metamodeling Through Artificial Neural Networks,” *Engineering Applications of Artificial Intelligence*, Vol. 16, No. 3, 2003, pp. 177-183.
- [65] Jarrah, M.A., Al-Assaf, Y., and El-Kadi, H., “Neuro-Fuzzy Modeling of Fatigue Life Prediction of Unidirectional Glass Fiber/Epoxy Composite Laminates,” *Journal of Composites Materials*, Vol. 36, No. 6, 2002, pp. 685-700.