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## References

- [1] J. P. Abbott, An Efficient Algorithm for the Determination of Certain Bifurcation Points, *J. Comput. Appl. Math.*, **4**, pp. 19–27 (1981)
- [2] E. L. Allgower, Simplicial and Continuation Methods for Approximating Fixed Points and Solutions to Systems of Equations, *SIAM Review*, **22**, 28–85 (1980)
- [3] E. L. Allgower, A Survey of Homotopy Methods for Smooth Mappings, in *Numerical Solution of Nonlinear Equations*, (eds. E. L. Allgower, K. Glashoff and H.-O. Peitgen), Lecture Notes in Mathematics 878, Springer-Verlag, Berlin (1981).
- [4] E. L. Allgower, Predictor-corrector and Simplicial Methods for Approximating Fixed Points and Zero Points of Nonlinear Mappings, in *Mathematical Programming: The State of the Art*, ed. by A. Bachem, M. Grötschel and B. Korte, Springer-Verlag, Berlin 15–55 (1983)
- [5] B. O. Almroth and F. A. Brogan, Bifurcation Buckling as an Approximation to the Collapse Load for General Shells, *AIAA J.*, **10**, 121–140 (1972)
- [6] B. O. Almroth and C. A. Felippa, Structural stability, in *Structural Analysis Computer Programs: Surveys, Assessments and Availability*, ed. by W. Pilkey, K. Saczalski and H. Schaeffer, University Press of Virginia, Charlottesville, Va. 499–539 (1974)
- [7] B. O. Almroth, P. Stern and F. A. Brogan, Automated Choice of Global Shape Functions in Structural Analysis, *AIAA Journal*, **16**, 525–528 (1978).
- [8] P. M. Anselone and R. H. Moore, An extension of the Newton-Kantorovich Method for Solving Nonlinear Equations with an Application to Elasticity, *J. Math. Anal. Appl.*, **13**, 476–501 (1966)
- [9] J. H. Argyris, H. Kelsey and H. Kamel, Matrix Methods of Structural Analysis: A Précis of Recent Developments, in B. Fraeijs de Veubeke (ed.) *Matrix Methods of Structural Analysis*, AGARDograph 72, Pergamon Press, Oxford, 1–164 (1964)
- [10] J. H. Argyris, Elasto-Plastic Matrix Displacement Analysis of Three-Dimensional Continua, *J. Royal Aero. Soc.*, **69**, 633–636 (1965)
- [11] J. H. Argyris, Continua and Discontinua, in *Proceedings Conference on Matrix Methods in Structural Engineering*, AFFDL-TR-66-80, Wright-Patterson AFB, Dayton, Ohio, 11–189 (1966).
- [12] J. H. Argyris *et. al.* (eds), *FENOMECH 1984, 3rd Int. Conf. on Finite Elements in Nonlinear Mechanics*, Stuttgart (1984)
- [13] H. Armen, Assumptions, Models, and Computational Methods for Plasticity, *Computers & Structures*, **10**, 161–174 (1979)
- [14] J. H. Avila, The Feasibility of Continuation Methods for Nonlinear Equations, *SIAM J. Numer. Anal.*, **11**, 102–120 (1974).
- [15] N. S. Bakhvalov, *Numerical Methods*, Mir Publishers, Moscow (1975).
- [16] K. J. Bathe, E. Ramm and E. L. Wilson, Finite Element Formulations for Large Deformation Dynamic Analysis, *Int. J. Num. Meth. Engrg.*, **9**, 353–386 (1975)

- [17] K. J. Bathe, J. T. Oden, and W. Wunderlich (eds.), *Formulation, and Computational Algorithms in Finite Element Analysis*, MIT Press, Cambridge (1977)
- [18] K. J. Bathe and A. Cimento, Some Practical Procedures for the Solution of Nonlinear Finite Element Equations, *Comp. Meth. Appl. Mech. Engrg.*, **22**, 59–85 (1980).
- [19] K. J. Bathe, *Finite Element Procedures in Engineering Analysis*, Prentice-Hall, Englewood Cliffs, New Jersey (1982)
- [20] K. J. Bathe and E. Dvorkin, On the Automatic Solution of Nonlinear Finite Element Equations, *Computers & Structures*, **17**, 871–879 (1983).
- [21] K. J. Bathe and A. Chaudhary, A Solution Method for Planar and Axisymmetric Contact Problems, *Int. J. Num. Meth. Engrg.*, **21**, 65–88 (1985).
- [22] J. L. Batoz and G. Dhatt, Incremental Displacement Algorithms for Nonlinear Problems, *Int. J. Num. Meth. Engrg.*, **14**, 1262–1267 (1979).
- [23] A. K. Basu, New Light on the Nayak Alpha Technique, *Int. J. Num. Meth. Engrg.*, **6**, 152–153 (1973).
- [24] T. Belytschko, An Overview of Semidiscretization and Time Integration Procedures, Ch. 1 in *Computational Methods for Transient Analysis*, ed. by T. Belytschko and T. J. R. Hughes, North-Holland, Amsterdam (1983)
- [25] P. G. Bergan, G. Horrigmoe, B. Krakeland and T. H. Søreide, Solution Techniques for Nonlinear Finite Element Problems, *Int. J. Num. Meth. Engrg.*, **12**, 1677–1696 (1978).
- [26] P. G. Bergan, Solution Algorithms for Nonlinear Structural Problems, *Computers & Structures*, **12**, 497–509 (1980).
- [27] P. G. Bergan and J. Simons, Hyperplane Displacement Control Methods in Nonlinear Analysis, in *Innovative Methods for Nonlinear Problems*, ed. by W. K. Liu, T. Belytschko and K. C. Park, Pineridge Press, Swansea, U.K., 345–364 (1984)
- [28] P. G. Bergan, K. J. Bathe and W. Wunderlich (eds), *Finite Element Methods for Nonlinear Problems*, Springer, Berlin (1986).
- [29] P. T. Boggs, The Solution of Nonlinear Systems of Equations by A-Stable Integration Techniques, *SIAM J. Numer. Anal.*, **8**, 767–785 (1971).
- [30] F. H. Branin and S. K. Hoo, A Method for Finding Multiple Extrema of a Function of  $n$  Variables, in *Numerical Methods for Nonlinear Optimization*, (ed. by F. A. Lootsma), Academic Press, London (1972).
- [31] R. P. Brent, Some Efficient Algorithms for Solving Systems of Nonlinear Equations, *SIAM J. Numer. Anal.*, **10**, 327–344
- [32] J. S. Brew and D. M. Morton, Nonlinear Structural Analysis by Dynamic Relaxation, *Int. J. Num. Meth. Engrg.*, **3**, 463–483 (1971).
- [33] F. Brezzi, J. Rappaz and P. A. Raviart, Finite Dimensional Approximation of Nonlinear Problems, Part 3: Simple Bifurcation Points, *Numer. Math.*, **38**, 1–30 (1981)

- [34] F. A. Brogan and B. O. Almroth, Practical Methods for Elastic Collapse Analysis of Shell Structures, *AIAA J.*, **9**, 2321–2325 (1971)
- [35] C. G. Broyden, A Class of Methods for Solving Nonlinear Simultaneous Equations, *Math. Comput.*, **19**, 577–593 (1965).
- [36] C. G. Broyden, Quasi-Newton Methods and their Application to Function Minimization, *Math. Comput.*, **21**, 368–381 (1967).
- [37] D. O. Brush and B. O. Almroth, *Buckling of Bars, Plates and Shells*, McGraw-Hill, New York (1975)
- [38] D. Bushnell, A Strategy for the Solution of Problems Involving Large Deflections, Plasticity and Creep, *Int. J. Numer. Meth. Engrg.*, **11**, 683–708 (1977).
- [39] D. Bushnell, Buckling of Shells – Pitfall for Designers, *AIAA J.*, **19**, 1183–1226 (1981).
- [40] D. Bushnell, *Plastic Buckling*, Ch. 2.4 in *Pressure Vessels and Piping Design Technology – A Decade of Progress*, ed. by S. Y. Zamrik and D. Dietrich, Book No. G00213, ASME, New York, 47–117 (1982).
- [41] D. Bushnell, *Computerized Buckling Analysis of Shells*, M. Nijhoff Pubs., Dordrecht (1985).
- [42] G. D. Byrne and C. A. Hall, *Numerical Solution of Systems of Nonlinear Algebraic Equations*, Academic Press, London (1973)
- [43] A. C. Cassel, Shells of Revolution under Arbitrary Loading and the Use of Fictitious Densities in Dynamic Relaxation, *Proc. Inst. Civil Engrs.*, **45**, 65–78 (1970)
- [44] T. F. Chan and H. B. Keller, Arclength Continuation and Multigrid Techniques for Nonlinear Elliptic Eigenvalue Problems, *SIAM J. Sci. Stat. Comput.*, **3**, (1982)
- [45] S. N. Chow, J. Mallet-Paret and J. A. Yorke, Finding Zeros of maps: Homotopy Methods that are Constructive with Probability One, *Math. Comput.*, **32**, pp. 887-899 (1978)
- [46] S. N. Chow and J. K. Hale, *Methods of Bifurcation Theory*, Springer-Verlag, New York (1982)
- [47] M. G. Crandall and P. H. Rabinowitz, Bifurcations from Simple Eigenvalues, *J. Functional Anal.*, **8**, 321–340 (1971)
- [48] M. A. Crisfield, A Faster Modified Newton-Raphson Iteration, *Comp. Meth. Appl. Mech. Engrg.*, **20**, 267–278 (1979)
- [49] M. A. Crisfield, Incremental/Iterative Solution Procedures for Nonlinear Structural Analysis, in *Numerical Methods for Nonlinear Problems, Vol. 1*, (eds. C. Taylor, E. Hinton and D. R. J. Owen), Pineridge Press, Swansea, U. K. (1980).
- [50] M. A. Crisfield, An Incremental-Iterative Algorithm that Handles Snap-Through, *Computer & Structures*, **13**, 55–62 (1981).
- [51] M. A. Crisfield, An Arc-Length Method Including Line Searches and Accelerations, *Int. J. Num. Meth. Engrg.*, **19**, 1269–1289 (1983).

- [52] R. W. Clough, The Finite Element Method in Plane Stress Analysis, *Proc. 2nd ASCE Conf. on Electronic Computation*, Pittsburgh, Pa. (1960)
- [53] G. Dahlquist, and A. Björk, *Numerical Methods*, Prentice-Hall, Englewood Cliffs, N. J. (1974)
- [54] D. F. Davidenko, On a New Method of Numerical Solution of Systems of Nonlinear Equations (in Russian), *Dokl. Akad. Nauk. USSR*, **88**, 601–602 (1953)
- [55] A. S. Day, An Introduction to Dynamic Relaxation, *The Engineer*, **219**, 218–221 (1965)
- [56] D. W. Decker and H. B. Keller, Path Following Near Bifurcation, *Comm. Pure Appl. Math. Anal.*, **34**, 149–175 (1984)
- [57] D. W. Decker, H. B. Keller and C. T. Kelley, Convergence Rates for Newton's Method at Singular Points, *SIAM J. Numer. Anal.*, **20**, 296–314 (1984)
- [58] F. H. Deist and L. Sefor, Solution of Systems of Nonlinear Equations by Parameter Variation, *Computer J.*, **10**, 78–82 (1967)
- [59] C. Den Heijer and W. C. Rheinboldt, On Steplength Algorithms for a Class of Continuation Methods, *SIAM J. Numer. Anal.*, **18**, 925–948 (1981)
- [60] J. E. Dennis and J. Moré, Quasi-Newton Methods: Motivation and Theory, *SIAM Review*, **19**, 46–84 (1977).
- [61] J. E. Dennis and R. Schnabel, *Numerical Methods for Unconstrained Optimization and Nonlinear Equations*, Prentice-Hall, Englewood Cliffs, New Jersey (1983)
- [62] C. A. Felippa, Refined Finite Element Analysis of Linear and Nonlinear Two-dimensional Structures, Ph.D. thesis, Dept. of Civil Engineering, University of California, Berkeley (1966)
- [63] C. A. Felippa, Finite Element Analysis of Three-Dimensional Cable Structures, in *Computational Methods in Nonlinear Mechanics* (ed. J. T. Oden *et al.*), The Texas Institute for Computational Mechanics, University of Texas, Austin, Texas, 311–324 (1974).
- [64] C. A. Felippa, Procedures for Computer Analysis of Large Nonlinear Structural Systems, in *Large Engineering Systems*, ed. by A. Wexler, Pergamon Press, London, 60–101 (1976).
- [65] C. A. Felippa, Error Analysis of Penalty Function Techniques for Constraint Definition in Linear Algebraic Systems, *Int. J. Numer. Meth. Engrg.*, **11**, 709–728 (1977)
- [66] C. A. Felippa, Dynamic Relaxation and Quasi-Newton Methods, in *Numerical Methods for Nonlinear Problems 2*, (eds C. Taylor, E. Hinton, D. R. J. Owen & E. Oñate), Pineridge Press, Swansea, U. K., 27–38 (1984).
- [67] C. A. Felippa, Dynamic Relaxation under General Increment Control, in *Innovative Methods for Nonlinear Problems*, ed. by W. K. Liu, T. Belytschko and K. C. Park, Pineridge Press, Swansea, U.K., 103–133 (1984)
- [68] C. A. Felippa, Traversing Critical Points by Penalty Springs, Proceedings of NUMETA'87 Conference, Swansea, Wales, M. Nijhoff Pubs, Dordrecht, Holland (1987)

- [69] C. A. Felippa, Penalty Spring Stabilization of Singular Jacobians, *J. Appl. Mechanics*, **54**, 730–733 (1987)
- [70] F. Ficken, The Continuation Method for Nonlinear Functional Equations, *Comm. Pure Appl. Math.*, **4**, 435–456 (1951)
- [71] R. Fletcher, *Practical Methods of Optimization*, 2nd ed., Wiley, New York (1987).
- [72] F. Freudenstein and B. Roth, *Numerical Solutions of Systems of Nonlinear Equations*, *J. ACM*, **10** 550–556 (1963)
- [73] I. Fried, Orthogonal Trajectory Accession to the Nonlinear Equilibrium Curve, *Comp. Meth. Appl. Mech. Engrg.*, **47** (1984), 283–297
- [74] R. H. Gallagher, J. Padlog and P. P. Bijlaard, Stress Analysis of Complex Heated Shapes, *J. Amer. Rocket Society*, **32** 700–707 (1962)
- [75] R. H. Gallagher, Perturbation Procedures in Nonlinear Finite Element Structural Analysis, Lecture Notes in Mathematics No. 461, Springer-Verlag, New York, pp. 75–89 (1975)
- [76] C. W. Gear, *Numerical Initial Value Problems in Ordinary Differential Equations*, Prentice-Hall, Englewood Cliffs, N.J. (1971)
- [77] K. Georg, Numerical Integration of the Davidenko Equation, in [3] (1981)
- [78] K. Georg, On Tracing an Implicitly Defined Curve by Quasi-Newton Steps and Calculating Bifurcation by Local Perturbations, *SIAM J. Sci. Stat. Computing*, **2**, 35–50 (1981)
- [79] M. Geradin, M. Hogge and S. Idelsohn, Nonlinear Structural Analysis via Newton and Quasi-Newton Methods, *Nucl. Eng. Design*, **58**, 339–348 (1980)
- [80] M. Geradin, M. Hogge and S. Idelsohn, Implicit Finite Element Methods, Ch. 9 in *Computational Methods for Transient Analysis*, ed. by T. Belytschko and T. J. R. Hughes, North-Holland, Amsterdam (1983)
- [81] P. E. Gill, W. Murray and M. H. Wright, *Practical Optimization*, Academic Press, London (1981).
- [82] J. E. Goldberg and R. H. Richards, Analysis of Nonlinear Structures, *J. Struct. Div. Proc. ASCE*, **89**, 333–336 (1963)
- [83] M. Golubitsky and D. G. Schaeffer, *Singularities and Groups in Bifurcation Theory*, Springer-Verlag, New York (1985)
- [84] L. A. Hageman and D. M. Young, *Applied Iterative Methods*, Academic Press, New York (1981).
- [85] W. E. Haisler, J. H. Stricklin and J. E. Key, Displacement Incrementation in Nonlinear Structural Analysis by the Self-Correcting Method, *Int. J. Num. Meth. Engrg.*, **11**, 3–10 (1977).
- [86] R. F. Hartung (ed.), *Numerical Solution of Nonlinear Structural Problems*, ASME/AMD Vol. 6, ASME, New York (1973)

- [87] C. B. Haselgrove, The Solution of Nonlinear Equations and of Differential Equations with Two-Point Boundary Conditions, *Computer J.*, **4**, 255–259 (1961).
- [88] P. Henrici, *Error Propagation for Difference Methods*, Wiley, New York (1963)
- [89] H. D. Hibbitt, P. V. Marcal, and J. R. Rice, A Finite Element Formulation for Problems of Large Strian and Large Displacement, *Int. J. Solids Struc.*, **6**, 1069–1086 (1970)
- [90] D. Y. Huang, Unified Approach to Quadratically Convergent Algorithms for Function Minimization, *J. Opt. Th. Appl.*, **5**, 405–423 (1970)
- [91] N. C. Huang and W. Nachbar, Dynamic Snap-Through of Imperfect Viscoelastic Shallow Arches, *J. Appl. Mech.*, **35**, 289–296
- [92] B. Irons and S. Ahmad, *Techniques of Finite elements*, Ellis Horwood Ltd., Chichester, England (1980)
- [93] H. B. Keller, Nonlinear Bifurcation, *J. Diff. Eqs.*, **7**, pp. 417–434 (1970)
- [94] H. B. Keller, Numerical Solution of Bifurcation and Nonlinear Eigenvalue Problems, in *Application of Bifurcation Theory*, ed. by P. H. Rabinowitz, Academic Press, New York, 359–384 (1977)
- [95] H. B. Keller, Global Homotopies and Newton Methods, in *Recent Advances in Numerical Analysis*, (eds. C. de Boor and G. H. Golub), Academic Press, New York (1978).
- [96] H. B. Keller, Geometrically Isolated Nonisolated Solutions and Their Approximation, *SIAM J. Num. Anal.*, **18**, 822–838 (1981).
- [97] N. Kikuchi and J. T. Oden, Contact Problems in Elastostatics, in *Finite Elements: Special Problems in Solid Mechanics*, ed. by J. T. Oden and G. Carey, Prentice-Hall, Englewood Cliffs, N. J. (1984)
- [98] N. Kikuchi and J. T. Oden, *Contact Problems in Elasticity: A Study of Variational Inequalities and Finite Elemnent Methods*, SIAM Studies in Applied Mathematics, SIAM, Philadelphia (1988)
- [99] R. W. Klopffestein, Zeros of Nonlinear Functions, *J. ACM*, **8**, 366–373 (1961)
- [100] R. J. Knops and E. W. Wilkes, Theory of Elastic Stability, in: *Encyclopedia of Physics* Vol VIa/1-4, ed. by S. Flugge, Springer-Verlag, Berlin (1973)
- [101] B. Kröplin, D. Dinkler and J. Hillmann, Global Constraints in Nonlinear Solution Strategies, in *Finite Element Methods for Nonlinear Problems*, ed. by P. G. Bergan, K. J. Bathe and W. Wunderlich, Springer, Berlin (1986).
- [102] M. Kubíček and V. Hlaváček, *Numerical Solution of Nonlinear Boundary Value Problems with Applications*, Prentice-Hall, Englewood Cliffs, New Jersey (1983).
- [103] M. Kubíček and M. Marek, *Computational Methods in Bifurcation Theory and Dissipative Structures*, Springer-Verlag, New York (1983).
- [104] T. Küpper, H. D. Mittelman and H. Weber (eds.) *Numerical Methods for Bifurcation Problems, ISNM*, **70**, Birkhäuser, Basel (1984)

- [105] T. Küpper, R. Seydel and H. Troger (eds.) *Bifurcation: Analysis, Algorithms, Applications, ISNM*, **79**, Birkhäuser, Basel (1987)
- [106] L. Lapidus and J. H. Seinfeld, *Numerical Solution of Ordinary Differential Equations*, Academic Press, New York (1971).
- [107] R. H. Mallet and P. V. Marcal, Finite Element Analysis of Nonlinear Structures, *J. Struct. Div. ASCE*, **94**, ST9, 2081–2105 (1968)
- [108] P. V. Marcal, A Stiffness Method for Elastic-Plastic Problems, *Int. J. Mech. Sci.*, 229–238 (1965)
- [109] P. V. Marcal, Finite Element Analysis with Material Nonlinearities – Theory and Practice, in R. H. Gallager, Y. Yamada and J. T. Oden (eds.) *Recent Advances in Matrix Methods in Structural Analysis and Design*, University of Alabama Press, Huntsville, Ala. (1969)
- [110] H. G. Martin, On the Derivation of Stiffness Matrices for the Analysis of Large Deflection and Stability Problems, *Proceedings Conference on Matrix Methods in Structural Engineering*, AFFDL-TR-66-80, Wright-Patterson AFB, Dayton, Ohio, 697–716 (1966).
- [111] H. Matthies and G. Strang, The Solution of Nonlinear Finite Element Equations, *Int. J. Num. Meth. Engrg.*, **14**, 1613–1626 (1979).
- [112] J. L. Meek and H. S. Tan, Geometrically Nonlinear Analysis of Space Frames by an Incremental-Iterative Technique, *Comp. Meth. Appl. Mech. Engrg.*, **47**, 261–282 (1984)
- [113] R. G. Melhem and W. C. Rheinboldt, A Comparison of Methods for Determining Turning Points of Nonlinear Equations, *Computing J.*, **29**, 201–226 (1982)
- [114] G. Meyer, On Solving Nonlinear Equations with a One-Parameter Operator Embedding, *SIAM J. Numer. Anal.*, **5**, 739–752 (1968)
- [115] G. Moore, The Numerical Treatment of Non-Trivial Bifurcation Points, *Numer. Funct. Anal. Optim.*, **17** 567–576 (1980).
- [116] G. Moore and A. Spence, The Calculation of Turning Points of Nonlinear Equations, *SIAM J. Numer. Anal.*, **17** 567–576 (1980).
- [117] D. W. Murray and E. L. Wilson, Finite Element Large-Deflection Analysis of Plates, *J. Eng. Mech. Div. ASCE*, **95**, EM5, 143–165 (1969).
- [118] D. W. Murray and E. L. Wilson, Finite Element Analysis of Nonlinear Structures, *AIAA J.*, **7**, 1915–1920 (1969).
- [119] A. K. Noor and J. M. Peters, Reduced Basis Technique for Nonlinear Analysis of Structures, *AIAA J.*, **18**, 455–462 (1980).
- [120] A. K. Noor, Recent Advances in Reduction Methods for Nonlinear Problems, *Computers & Structures*, **13**, 31–44 (1983).
- [121] B. Nour-Omid and P. Wriggers, Solution Methods for Contact Problems, *Comp. Meth. Appl. Mech. Engrg.*, **52**, (1986).



- [122] J. T. Oden, Calculation of Geometric Stiffness Matrices for Thin Shells of Arbitrary Shape, *AAIA J.*, **4**, 1480–1482 (1966).
- [123] J. T. Oden, Numerical Formulation of Nonlinear Elasticity Problems, *J. Struct. Div. ASCE*, **93**, 235–255 (1967).
- [124] J. T. Oden, *Finite Elements of Nonlinear Continua*, Mc-Graw Hill, New York (1972)
- [125] J. T. Oden and S. W. Key, Analysis of Static Nonlinear Response by Explicit Time Integration, *Int. J. Num. Meth. Engrg.*, **7**, 225–240 (1973).
- [126] J. T. Oden *et. al.* (eds.), *Computational Methods in Nonlinear Mechanics*, The Texas Institute for Computational Mechanics (TICOM), University of Texas, Austin, Texas (1974).
- [127] J. T. Oden, Exterior Penalty Methods for Contact Problems in Elasticity, in *Nonlinear Finite Element Analysis in Structural Mechanics*, ed. by W. Wunderlich, P. Stein and K. J. Bathe, Springer, Berlin (1981)
- [128] J. M. Ortega and W. C. Rheinboldt, *Iterative Solution of Nonlinear Equations in Several Variables*, Academic Press, New York (1970)
- [129] J. R. H. Otter, Computations for Prestressed Concrete Reactor Pressure Vessels Using Dynamic Relaxation, *Nucl. Struct. Engrg.*, **1**, 61-75 (1965).
- [130] J. Padovan, Self-Adaptive Predictor-Corrector Algorithm for Static Nonlinear Structural Analysis, Report NASA CR-165410 to Lewis Research Center, The University of Akron, Akron, Ohio (1981).
- [131] J. Padovan and S. Tovchakchaikul, Self-Adaptive Predictor-Corrector Algorithm for Static Nonlinear Structural Analysis, *Computers & Structures*, **15**, 365–377 (1982).
- [132] M. Papadrakakis, Post-Buckling Analysis of Spatial Structures by Vector Iteration Methods, *Computers & Structures*, **12**, 393–402 (1981)
- [133] K. C. Park and C. A. Felippa, Direct Time Integration Methods in Nonlinear Structural Dynamics, *Comp. Meth. Appl. Mech. Engrg.*, **17/18**, pp. 277–313 (1979)
- [134] K. C. Park and P. G. Underwood, A Variable Step Central Difference Method for Structural Dynamics Analysis: Theoretical Aspects, *Comp. Meth. Appl. Mech. Engrg.*, **22**, 241–258 (1980)
- [135] K. C. Park, Time Integration of Structural Dynamics: A Survey, Ch. 4.2 in *Pressure Vessels and Piping Design Technology – A Decade of Progress* ASME, New York (1982).
- [136] K. C. Park, A Family of Solution Algorithms for Nonlinear Structural Analysis Based on the Relaxation Equations, *Int. J. Num. Meth. Engrg.*, **18**, 1337-1347 (1982).
- [137] B. N. Parlett, *The Symmetric Eigenvalue Problem*, Prentice-Hall, Englewood Cliffs, New Jersey (1980).
- [138] G. G. Pope, The Application of the Matrix Displacement Method in Plane Elasto-Plastic Problems, *Proceedings Conference on Matrix Methods in Structural Engineering*, AFFDL-TR-66-80, Wright-Patterson AFB, Dayton, Ohio, 635–654 (1966).

- [139] G. Pönish and H. Schwetlik, Computing Turning Points Using a of Curves Implicitly Defined by Nonlinear Equations Depending on a Parameter, *Computing J.*, **26**, 107–121 (1981)
- [140] G. Pönish, Computing Simple Bifurcation Points Using a Minimally Extended System of Nonlinear Equations, *Computing J.*, **35**, 277–294 (1985)
- [141] T. Poston and I. Steward, *Catastrophe Theory and its Applications*, Pitman, London (1978)
- [142] G. H. Powell and J. Simons, Improved Iteration Strategy for Nonlinear Structures, *Int. J. Num. Meth. Engrg.*, **17**, 1455–1467 (1981)
- [143] P. H. Rabinowitz, *Numerical Methods for Nonlinear Algebraic Equations*, Gordon and Breach, New York, (1970)
- [144] L. B. Rall, *Computational Solution of Nonlinear Operator Equations*, Wiley, New York (1969)
- [145] L. B. Rall (ed.), *Nonlinear Functional Analysis and Applications*, Academic Press, New York (1971)
- [146] E. Ramm, Strategies for Tracing the Nonlinear Response Near Limit Points, in *Proc. Europe-US Workshop on Nonlinear Finite Element Analysis in Structural Mechanics*, Bochum 80, Springer-Verlag, Berlin (1981)
- [147] E. Ramm, The Riks/Wempner Approach – An Extension of the Displacement Control Method in Nonlinear Analysis, in *Recent Advances in Nonlinear Computational Mechanics*, ed. by E. Hinton *et. al.*, Pineridge Press, Swansea, U.K. 63–86 (1982)
- [148] J. K. Reid, On the Method of Conjugate Gradients for the Solution of Large Sparse Systems of Equations, in *Large Sparse Sets of Linear Equations*, ed. by J. K. Reid, Academic Press, London 231–154 (1971)
- [149] W. C. Rheinboldt, Numerical Methods for a Class of Finite-Dimensional Bifurcation Problems, *SIAM J. Numer. Anal.*, **15**, 1–11 (1978).
- [150] W. C. Rheinboldt, Numerical Analysis of Continuation Methods for Nonlinear Structural Problems, *Computers & Structures*, **13**, 130–141 (1981).
- [151] W. C. Rheinboldt, Computation of Critical Boundaries on Equilibrium Manifolds, *SIAM J. Numer. Anal.*, **19** 653–669 (1982).
- [152] W. C. Rheinboldt and J. V. Burkardt, A Locally Parametrized Continuation Process, *ACM Trans. Math. Software*, **9**, 215–235 (1983).
- [153] W. C. Rheinboldt, *Numerical Analysis of Parametrized Nonlinear Equations*, Wiley, New York (1986)
- [154] E. Riks, The Application of Newton’s Method to the Problem of Elastic Stability, *Trans. ASME, J. Appl. Mech.*, **39**, 1060–1065 (1972)
- [155] E. Riks, An Incremental Approach to the Solution of Snapping and Buckling Problems, *Int. J. Solids Structures*, **15**, 329–351 (1979)
- [156] E. Riks, Some Computational Aspects of the Stability Analysis of Nonlinear Structures, *Comp. Meth. Appl. Mech. Engrg.*, **47**, 219–260 (1984)

- [157] E. Riks, Bifurcation and Stability, A Numerical Approach, in *Innovative Methods for Nonlinear Problems*, ed. by W. K. Liu, T. Belytschko and K. C. Park, Pineridge Press, Swansea, U.K., 313–344 (1984)
- [158] E. Riks, Progress in Collapse Analysis, *J. Pressure Vessels Tech.*, **109**, 33–41 (1987)
- [159] L. E. Scales, *Introduction to Non-Linear Optimization*, Springer-Verlag New York, NY (1985)
- [160] W. F. Schmidt, Adaptive Stepsize Selection for Use with the Continuation Method, *Int. J. Num. Meth. Engrg.*, **12**, 677–694 (1978)
- [161] M. J. Sewell, On the Connexion Between Stability and the Shape of the Equilibrium Surface, *J. Mech. Phys. Solids*, **14**, 203–230 (1966)
- [162] M. J. Sewell, A General Theory of Equilibrium Paths Through Critical Points I-II, *Proc. Roy. Soc. London*, **A306**, 201–238 (1968)
- [163] M. J. Sewell, *Maximum and Minimum Principles*, Cambridge Univ. Press, Cambridge, England (1987)
- [164] R. Seydel, *From Equilibrium to Chaos — Practical Bifurcation and Stability Analysis*, Elsevier, New York (1988)
- [165] P. Sharifi and E. P. Popov, Nonlinear Buckling Analysis of Sandwich arches, *J. Engrg. Div. ASCE* **97**, 1397–1411 (1971)
- [166] P. Sharifi and E. P. Popov, Nonlinear Finite Element Analysis of Sandwich Shells of Revolution, *AIAA J.*, **11**, 715–722 (1973)
- [167] J. C. Simo, P. Wriggers, K. H. Schweizerhof and R. L. Taylor, Finite Deformation Postbuckling Analysis Involving Inelasticity and Contact Constraints, in *Innovative Methods for Nonlinear Problems*, ed. by W. K. Liu, T. Belytschko and K. C. Park, Pineridge Press, Swansea, U.K., 365–388 (1984)
- [168] G. Skeie and C. A. Felippa, A Local Hyperelliptic Constraint for Nonlinear Analysis, Proceedings of NUMETA'90 Conference, Swansea, Wales, Elsevier Sci. Pubs, (1990)
- [169] G. Skeie and C. A. Felippa, Solution of Nonlinear Bifurcation Problems, submitted to *Journal of Space Structures*, (1990)
- [170] L. H. Sobel and K. Thomas (eds.), *Collapse Analysis of Structures*, PVP Vol. 84, ASME, New York (1984)
- [171] E. Stein, W. Wagner and P. Wriggers, Finite Element Analysis of Stability Problems with Contact, in *Finite Element Methods for Nonlinear Problems*, ed. by P. G. Bergan, K. J. Bathe and W. Wunderlich, Springer, Berlin (1986)
- [172] J. Stoer, Conjugate Gradient Type Methods, in *Mathematical Programming: The State of the Art*, ed. by A. Bachem, M. Grötschel and B. Korte, Springer-Verlag, Berlin, 540–565 (1983)
- [173] E. Stein, W. Wagner and P. Wriggers, Finite Element Analysis of Stability Problems with Contact, in *Finite Element Methods for Nonlinear Problems*, ed. by P. G. Bergan, K. J. Bathe and W. Wunderlich, Springer, Berlin (1986)

- [174] G. Strang, The Quasi-Newton Method in Finite Element Computations, 451–456 of *Computational Methods in Nonlinear Mechanics*, ed. by J. T. Oden, North Holland, Amsterdam (1980)
- [175] J. A. Stricklin, W. E. Haisler and W. A. Von Riesenmann, Self-correcting Initial Value Formulations in Nonlinear Structural Mechanics, *AIAA Journal*, **9**, 2066-2067 (1971)
- [176] J. A. Stricklin, W. A. Von Riesenmann, J. R. Tillerson and W. E. Haisler, Static Geometric and Material Nonlinear Analysis, in *Proc. 2nd U.S.-Japan Seminar on Advances in Computational Methods in Structural Mechanics and Design*, ed. by J. T. Oden, R. W. Clough and Y. Yamamoto, UAH Press, University of Alabama, Huntsville, 301–324 (1972)
- [177] J. A. Stricklin, W. E. Haisler and W. A. von Riesenmann, Evaluation of Solution Procedures for Nonlinear Structural Analysis, *AIAA J.*, **11**, 292–299 (1973).
- [178] J. A. Stricklin and W. E. Haisler, Formulation and Solution Procedures for Nonlinear Structural Analysis, *Computers & Structures*, **7**, 125–136 (1977).
- [179] C. Taylor, E. Hinton, D. R. J. Owen (eds.) *Numerical Methods for Nonlinear Problems I*, Pineridge Press, Swansea, U. K. (1981).
- [180] C. Taylor, E. Hinton, D. R. J. Owen and E. Oñate (eds.), *Numerical Methods for Nonlinear Problems II*, Pineridge Press, Swansea, U. K. (1984).
- [181] J. M. T. Thompson and G. W. Hunt, *A General Theory of Elastic Stability*, Wiley, London (1973).
- [182] J. M. T. Thompson, *Instabilities and Catastrophes in Science and Engineering*, Wiley, London (1982)
- [183] J. M. T. Thompson and G. W. Hunt, *Static and Dynamic Instability Phenomena*, Wiley, London (1983).
- [184] G. A. Thurston, Continuation of Newton's Method Through Bifurcation Points, *J. Appl. Mech.*, **36**, 425-430 (1969)
- [185] J. R. Tillerson, J. A. Stricklin, and W. E. Haisler, Numerical Methods for the Solution of Nonlinear Problems in Structural Analysis, in *Numerical Solution of Nonlinear Problems*, ed. by R. F. Hartung, AMD Vol. 6, ASME, New York (1972)
- [186] J. F. Traub, *Iterative Methods for the Solution of Equations*, Prentice-Hall, Englewood Cliffs, New Jersey (1964).
- [187] M. J. Turner, E. H. Dill, H. C. Martin and R. J. Melosh, Large deflection analysis of complex structures subjected to heating and external loads, *J. Aerospace Sci.*, **27** (1960) 97-107
- [188] M. J. Turner, H. C. Martin and B. C. Weikel, Further Developments and applications of the Stiffness Method, in B. Fraeijs de Veubeke (ed.) *Matrix Methods of Structural Analysis*, AGARDograph 72, Pergamon Press, Oxford, 203–266 (1964)
- [189] P. G. Underwood, Dynamic Relaxation, Ch. 5 in *Computational Methods for Transient Dynamic Analysis* (eds. T. Belytschko and T. J. R. Hughes), North-Holland, Amsterdam (1983).
- [190] H. Wacker (ed.), *Continuation Methods*, Academic Press, New York (1978).

- [191] E. Wasserstrom, Numerical Solutions by the Continuation Method, *SIAM Review*, **15**, 89–119 (1973)
- [192] L. T. Watson, An Algorithm that is Globally Convergent with Probability One for a Class of Nonlinear Two-Point Boundary Value Problems, *SIAM J. Numer. Anal.*, **16**, 394–401 (1979).
- [193] L. T. Watson and S. M. Holzer, Quadratic Convergence of Crisfield's Method, *Computers & Structures*, **17**, 69–72 (1983).
- [194] G. A. Wempner, Discrete Approximations Related to Nonlinear Theories of Solids, *Int. J. Solids Structures*, **7**, 1581–1599 (1971).
- [195] B. Werner, and A. Spence, The Computation of Symmetry-Breaking Bifurcation Points, *SIAM J. Numer. Anal.*, **8**, 767–785 (1971).
- [196] R. E. White, *An Introduction to the Finite Element Method with Applications to Nonlinear Problems*, Wiley, New York (1985)
- [197] K. J. Willam, Numerical Solution of Inelastic Rate Processes, *Computers & Structures*, **8**, 511–531 (1978).
- [198] W. Wunderlich, P. Stein and K. J. Bathe (eds.), *Nonlinear Finite Element Analysis in Structural Mechanics*, Springer, Berlin (1981)
- [199] Y.-B. Yang and W. McGuire, A Work Control Method for Geometrically Nonlinear Analysis, *Proceedings NUMETA 85 Conference -Vol. 2*, A. Balkema Pubs, Rotterdam, 913–921 (1985)
- [200] O. C. Zienkiewicz, S. Valliappan and I. P. King, Elasto-plastic Solutions of Engineering Problems: 'Initial Stress', Finite Element Approach, *Int. J. Numer. Meth. Engrg.*, **1**, 75–100 (1969).
- [201] O. C. Zienkiewicz, Incremental Displacement in Nonlinear Analysis, *Int. J. Numer. Meth. Engrg.*, **3**, 587–592 (1973).
- [202] O. C. Zienkiewicz, *The Finite Element Method in Engineering Science*, 3rd ed., McGraw-Hill (1976)
- [203] O. C. Zienkiewicz and R. Löhner, Accelerated 'Relaxation' or Direct Solution?, Future Prospects for FEM, *Int. J. Numer. Meth. Engrg.*, **21**, 1–11 (1985)