

R

References (in progress)

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§R.1. Foreword

Collected references for most Chapters (except those in progress) for books

Introduction to Finite Element Methods, abbrev. IFEM
Advanced Finite Element Methods; abbrev. AFEM
Nonlinear Finite Element Methods; abbrev. NFEM
Matrix Finite Element Methods in Statics; abbrev. MFEMS
Matrix Finite Element Methods in Dynamics; abbrev. MFEMD

Margin letters are to facilitate sort; will be removed on completion.

Note: Many of the books listed below are out of print. The advent of the Internet has meant that it is easier to surf for used books across the world without moving from your desk. There is a fast search “metaengine” for comparing prices at URL <http://www.addall.com>: click on the “search for used books” link. Amazon.com has also a search engine, which is poorly organized, confusing and full of unnecessary hype, but links to online reviews. [Since about 2008, old scanned books posted online on Google are an additional potential source; free of charge if the useful pages happen to be displayed.]

§R.2. Reference Database

A

- [1] Abramowitz, M. and Stegun, L. A. (eds.), *Handbook of Mathematical Functions with Formulas, Graphs and Mathematical Tables*, Applied Mathematics Series 55, Natl. Bur. Standards, U.S. Department of Commerce, Washington, D.C., 1964; reprinted by Wiley, 1993.
- [2] Abu-Gazaleh, B. N., Analysis of plate-type prismatic structures, *Ph. D. Dissertation*, Dept. of Civil Engineering, Univ. of California, Berkeley, CA, 1965.
- [3] Adini, A., Analysis of shell structures by the finite element method, *Ph. D. Dissertation*, Dept. of Civil Engineering, University of California, Berkeley, CA., 1961.
- [4] Ahmad, S., Irons, B. M., and Zienkiewicz, O. C., Analysis of thick and thin shell structures by curved finite elements, *Int. J. Numer. Meth. Engrg.*, **2**, 419–451, 1970.
- [5] Aitken, A. C., *Determinants and Matrices*, Oliver and Boyd, Edinburgh and London, 1939 (2nd-9th editions, 1942–56, 9th edition, reset and reprinted, 1967, Greenwood Press, Westport CN, 1983.)
- [6] Allman, D. J., Triangular finite elements for plate bending with constant and linearly varying bending moments, *Proc. IUTAM Conf. on High Speed Computing of Elastic Structures*, Liège, Belgium, 105–136, 1970.
- [7] Allman, D. J., Evaluation of the constant strain triangle with drilling rotations, *Int. J. Numer. Meth. Engrg.*, **26**, 2645–2655, 1988.
- [8] Alvin, K., de la Fuente, H. M., Haugen, B., and Felippa, C.A., Membrane triangles with corner drilling freedoms: I. The EFF element, *Finite Elem. Anal. Des.*, **12**, 163–187, 1992.
- [9] Anonymous, The NASTRAN Theoretical Manual, NASA SP-221, 1970; The NASTRAN User’s Manual, NASA SP-222, 1970; The NASTRAN Programmer’s Manual, NASA SP-223, 1970; The NASTRAN Demonstration Problem Manual, NASA SP-223, 1970.
- [10] Argyris, J. H. and Kelsey, S., *Energy Theorems and Structural Analysis*, Butterworth, London, 1960; Part I reprinted from *Aircr. Engrg.*, **26**, Oct-Nov 1954 and **27**, April-May 1955.

- [11] Argyris, J. H., Kelsey, S., and Kamel, H., Matrix methods of structural analysis — a precis of recent developments, in *AGARDograph 72: Matrix Methods of Structural Analysis*, ed. by B. M. Fraeijs de Veubeke, Pergamon Press, Oxford, 1–164, 1964.
- [12] Argyris, J. H., Continua and discontinua, *Proceedings 1st Conference on Matrix Methods in Structural Mechanics*, AFFDL-TR-66-80, Air Force Institute of Technology, Dayton, Ohio, 10–170, 1966.
- [13] Argyris, J. H., Matrix analysis of three-dimensional elastic media: small and large displacements, *AIAA J.*, **3**, 45–51, 1965.
- [14] Archer, J. S., Consistent mass matrix for distributed mass systems, *J. ASCE Struct. Div.*, **89**, 161–178, 1963.
- [15] Archer, J. S., Consistent mass matrix formulation for structural analysis using finite element techniques, *AIAA J.*, **3**, 1910–1918, 1965.
- [16] Ashwell, D. G. and Gallagher, R. (eds.), *Finite Elements For Thin Shells and Curved Members*, Wiley, London, 1976.
- [17] Atluri, S. N., Gallagher, R. N., and Zienkiewicz, O. C., (eds.), *Hybrid and Mixed Finite Element Methods*, Wiley, New York, 1983.

B

- [18] Ballarini, R., The Da Vinci-Bernoulli-Euler beam theory?, *Mech. Engrg. Magazine Online*, 2003. Available from <http://memagazine.org/contents/current/webonly/webex418.html>
- [19] Banachiewicz, T., Zur Berechnung der Determinanten, wie auch der Inversen, und zur darauf basierten Auflösung der Systeme linearer Gleichungen, *Acta Astronomica Series C*, **3**, 41–97, 1937.
- [20] Barlow, J., Optimal stress locations in finite element models, *Int. J. Numer. Meth. Engrg.*, **10**, 243–251, 1976.
- [21] Barlow, J., More on stress-points reduced integration, element distortions and error estimation, *Int. J. Numer. Meth. Engrg.*, **28**, 1487–1504, 1989.
- [22] Bartlett, M. S., An inverse matrix adjustment arising in discriminant analysis, *Ann. Math. Stat.*, **22**, 107–111, 1951.
- [23] Bathe, K.-J. and Wilson, E. L., *Numerical Methods for Finite Element Analysis*, Prentice Hall, Englewood Cliffs, NJ, 1976.
- [24] Bathe, K.-J., *Finite Element Procedures in Engineering Analysis*, Prentice Hall, Englewood Cliffs, NJ, 1982.
- [25] Batoz, J. L., An explicit formulation for an efficient triangular plate-bending element. *Int. J. Numer. Meth. Engrg.*, **18**, 1077–1089, 1982.
- [26] Bathe, K.-J. and Dvorkin, E. N., A four-node plate bending element based on Mindlin-Reissner plate theory and a mixed interpolation, *Int. J. Numer. Meth. Engrg.*, **21**, 367–383, 1985.
- [27] Bazeley, G. P., Cheung, Y. K., Irons, B. M., and Zienkiewicz, O. C., Triangular elements in plate bending – conforming and nonconforming solutions, in *Proc. 1st Conf. Matrix Meth. Struc. Mech.*, ed. by J. Przemieniecki et. al., AFFDL-TR-66-80, Air Force Institute of Technology, Dayton, Ohio, 1966, 547–576.
- [28] Becker, M., *The Principles and Applications of Variational Methods*, MIT Press, Cambridge, 1964.
- [29] Beer, F. P. and Johnston, E. R., *Mechanics of Materials*, McGraw-Hill, 2nd ed. 1992.

- [30] Belytschko, T., Stolarski, H., Liu, W. K., Carpenter, N., and Ong, J., Stress projection for membrane and shear locking in finite elements, *Comp. Meths. Appl. Mech. Engrg.*, **51**, 221–258, 1985.
- [31] Belytschko, T. and Mullen, R., On dispersive properties of finite element solutions, in *Modern Problems in Elastic Wave Propagation*, ed. by J. Miklowitz and J. D. Achenbach, Wiley, New York, 67–82, 1978.
- [32] Belytschko, T., Liu, W. K., and Engelmann, B. E., The gamma elements and related developments, in T. J. R. Hughes and E. Hinton (eds.), *Finite Element Methods for Plate and Shell Structures, Vol. I: Element Technology*, Pineridge Press, Swansea, U.K., 316–347, 1986
- [33] Bellman, R., *Introduction to Matrix Analysis*, McGraw-Hill, New York, 1970.
- [34] Belytschko, T. and Hughes, T. J. R. (eds.), *Computational Methods for Transient Analysis*, Elsevier Sci. Pubs., Ltd., 1983.
- [35] Ben-Israel, A. and Greville, T. N. E., *Generalized Inverses: Theory and Applications* Springer-Verlag, New York, 2nd ed., 2003.
- [36] Bergan, P. G. and Hanssen, L., A New Approach for Deriving ‘Good’ Finite Elements, in *The Mathematics of Finite Elements and Applications – Volume II*, ed. by J. R. Whiteman, Academic Press, London, 483–497, 1976.
- [37] Bergan, P. G., Finite elements based on energy orthogonal functions, *Int. J. Numer. Meth. Engrg.*, **15**, 1141–1555, 1980.
- [38] Bergan, P. G. and Nygård, M. K., Finite elements with increased freedom in choosing shape functions, *Int. J. Numer. Meth. Engrg.*, **20**, 643–664, 1984.
- [39] Bergan, P. G. and Felippa, C. A., A triangular membrane element with rotational degrees of freedom, *Comp. Meths. Appl. Mech. Engrg.*, **50**, 25–69, 1985.
- [40] Bergan, P. G. and Nygård, M. K., Nonlinear shell analysis using free formulation finite elements, *Proc. Europe-US Symposium on Finite Element Methods for Nonlinear Problems*, Springer-Verlag, Berlin, 1986.
- [41] Bickford, W. B. B., *Advanced Mechanics of Materials*, Addison-Wesley Longman, Menlo Park, CA, 1998.
- [42] Bodewig, E., *Matrix Calculus*, North-Holland, Amsterdam, 1956. (Second revised and enlarged edition 1959.)
- [43] Bogner, F. K., Fox, R. L., and Schmidt Jr., L. A., The generation of interelement compatible stiffness and mass matrices by the use of interpolation formulas, *Proc. Conf. on Matrix Methods in Structural Mechanics*, WPAFB, Ohio, 1965, in *AFFDL TR 66-80*, 397–444, 1966.
- [44] Boley, B. A. and Wiener, J. H., *Theory of Thermal Stresses*, Wiley, New York, 1960.
- [45] Boresi, A. P., Schmidt, R. J., and Sidebottom, O. M., *Advanced Mechanics of Materials*, 5th ed., Wiley, 1993.
- [46] Born, M. and Huang, K., *Dynamical Theory of Crystal Lattices*, Oxford, London, 1954.
- [47] Brillouin, L., *Wave Propagation in Periodic Structures*, Dover, New York, 1946.

C

- [48] Calladine, C. R., *Theory of Shell Structures*, Cambridge University Press, 1983.
- [49] Campbell, S. L. and Meyer, C. D., *Generalized Inverses of Linear Transformations*, Dover, NY, 1991.

- [50] Caratheodory, C., *Calculus of Variations and Partial Differential Equations of the First Order*, Chelsea, New York, 1982. Translated reprint of the original German edition, Teubner, Berlin, 1935.
- [51] Carr, A. J., A refined finite element analysis of thin shell structures including dynamic loadings, *Ph. D. Dissertation*, Department of Civil Engineering, University of California at Berkeley, Berkeley, CA, 1968.
- [52] Ceruzzi, P. E., *A History of Modern Computing*, The MIT Press, Cambridge, MA, 1998.
- [53] Chandrasekhar, S., *Radiative Transfer*, Dover, New York, 1960.
- [54] Cline, R. E., Note on the generalized inverse of the product of matrices, *SIAM Review*, **6**, 57–58, 1964.
- [55] Clough, R. W., The finite element method in plane stress analysis, *Proc. 2nd ASCE Conf. on Electronic Computation*, Pittsburgh, Pa, 1960.
- [56] Clough, R. W., The stress distribution of Norfork Dam, Univ. of California at Berkeley, *Inst. Res. Rept.*, Ser. 100, **19**, March 1962, rev. August 1962.
- [57] Clough, R. W., The finite element method in structural mechanics, in *Stress Analysis*, ed. by O. C. Zienkiewicz and G. S. Holister, Wiley, London, 85–119, 1965.
- [58] Clough, R. W. and Tocher, J. L., Finite element stiffness matrices for the analysis of plate bending. In *Proceedings 1st Conference on Matrix Methods in Structural Mechanics*, AFFDL-TR-66-80, Air Force Institute of Technology, Dayton, Ohio, 515–547, 1966.
- [59] Clough, R. W., Analysis of structural vibrations and dynamic response, in *Recent Advances in Matrix Methods of Structural Analysis and Design*, ed by R. H. Gallagher, Y. Yamada and J. T. Oden, University of Alabama Press, Huntsville, AL, 441–486, 1971.
- [60] Clough, R. W. and Penzien, J., *Dynamics of Structures*, McGraw-Hill, 1975; 2nd ed., 1993.
- [61] Clough, R. W., Comparison of three-dimensional finite elements, in *Symposium on Application of Finite Element Methods in Civil Engineering*, ed. by W. H. Rowan and R. M. Hackett, TN ASCE, Nashville, 1969.
- [62] Clough, R. W., The finite element method after twenty-five years: a personal view, *Computers & Structures*, **12**, 361–370, 1980.
- [63] Clough, R. W., The finite element method – a personal view of its original formulation, in *From Finite Elements to the Troll Platform – the Ivar Holand 70th Anniversary Volume*, ed. by K. Bell, Tapir, Norway, 89–100, 1994.
- [64] Clough, R. W. and Wilson, E. L., Early finite element research at Berkeley, Proc. 5th US National Conf. Comp. Mech., Boulder, CO, August 1999.
- [65] Cook, R. D., Malkus, D. S., and Plesha, M. E., *Concepts and Application of Finite Element Methods*, 3rd ed., Wiley, New York, 1989.
- [66] Cools, R., Constructing cubature formulas - the science behind the art, *Acta Numerica*, Cambridge University Press, **6**, 1–54, 1999.
- [67] Cools, R., Monomial cubature rules since “Stroud”: a compilation — Part 2, *J. Comput. Appl. Math.*, **112**, 21–27, 1999.
- [68] Cools, R., An encyclopædia of cubature formulas, *J. Complexity*, **19**, 445–453, 2003.
- [69] Courant, R. and Hilbert, D., *Methods of Mathematical Physics*, 2 vols, Interscience Pubs, 1962. Translation of *Methoden der Mathematischen Physik*, Springer-Verlag, Berlin, 1937.

- [70] Courant, R., Variational methods for the solution of problems in equilibrium and vibrations, *Bull. Amer. Math. Soc.*, **49**, 1–23, 1943; reprinted in *Int. J. Numer. Meth. Engrg.*, **37**, 643–645, 1994.
- [71] Coxeter, H.S.M., Barycentric coordinates, §13.7 in *Introduction to Geometry*, 2nd ed., Wiley, New York, 216–221, 1969.
- [72] Crabtree, D. E. and Haynsworth, E. V., An identity for the Schur complement of a matrix, *Proc. Amer. Math. Soc.*, **22**, 364–366, 1969.
- [73] Crandall, S. H., *Engineering Analysis: A Survey of Numerical Procedures*, McGraw-Hill, New York, 1956.
- [74] Crisfield, M. A., A four-noded thin plate bending element using shear constraints – a modified version of Lyons’ element, *Comp. Meths. Appl. Mech. Engrg.*, **39**, 93–120, 1983.
- [75] Crisfield, M. A., A quadratic Mindlin element using shear constraints, *Computers & Structures*, **18**, 833–852, 1984.
- [76] Crisfield, M. A., Explicit integration and the isoparametric arch and shell elements, *Comm. Appl. Numer. Meth.*, **2**, 181–187, 1986.
- [77] Cross, H., Analysis of continuous frames by distributing fixed-end moments, Proceedings American Society of Civil Engineers (ASCE), 919–928, 1930, and Transactions ASCE bf 96, 1–10, 1932; reprinted in *Numerical Methods of Analysis in Engineering*, ed. by L. E. Grinter, MacMillan, New York, 1–13, 1948.

D

- [78] Davis, H. T., *Introduction to Nonlinear Differential and Integral Equations*, Dover, New York, 1962.
- [79] Dhatt, G., An efficient triangular shell element, *AIAA J.*, **8**, No. 11, 2100–2102, 1970.
- [80] Doherty, W. P., Wilson E. L., and Taylor, R. L., Stress analysis of axisymmetric solids utilizing higher order quadrilateral finite elements, SESM Report 69-3, Department of Civil Engineering, University of California, Berkeley, 1969.
- [81] Duncan, W. J. and Collar, A. R., A method for the solution of oscillations problems by matrices, *Phil. Mag.*, Series 7, **17**, 865–885, 1934.
- [82] Duncan, W. J. and Collar, A. R., Matrices applied to the motions of damped systems, *Phil. Mag.*, Series 7, **19**, 197–214, 1935.
- [83] Duncan, W. J., Some devices for the solution of large sets of simultaneous linear equations, *Phil. Mag.*, Series 7, **35**, 660–670, 1944.

E

- [84] Edelsbrunner, H., *Geometry and Topology for Mesh Generation*, Cambridge Univ. Press, Cambridge, 2001.
- [85] Egeland, O. and Araldsen, H., SESAM-69: A general purpose finite element method program, *Computers & Structures*, **4**, 41–68, 1974.
- [86] Ergatoudis, J., Irons, B. M., and Zienkiewicz, O. C., Curved, isoparametric, “quadrilateral” elements for finite element analysis, *Int. J. Solids Struc.*, **4**, 31–42, 1968.

F

- [87] Farhat, C. and Roux, F. X., Implicit parallel processing in structural mechanics, *Comput. Mech. Advances*, **2**, No. 1, 1–124, 1994.
- [88] Felippa, C. A., Refined finite element analysis of linear and nonlinear two-dimensional structures, *Ph.D. Dissertation*, Department of Civil Engineering, University of California at Berkeley, Berkeley, CA, 1966.
- [89] Felippa, C. A. and Clough R. W., The finite element method in solid mechanics, in *Numerical Solution of Field Problems in Continuum Physics*, ed. by G. Birkhoff and R. S. Varga, SIAM-AMS Proceedings II, American Mathematical Society, Providence, R.I., 210–252, 1969.
- [90] Felippa, C. A., Solution of equations with skyline-stored symmetric coefficient matrix, *Computers & Structures*, **5**, 13–25, 1975.
- [91] Felippa, C. A., Iterative procedures for improving penalty function solutions of algebraic systems, *Int. J. Numer. Meth. Engrg.*, **12**, 821–836, 1978.
- [92] Felippa, C. A. and Militello, C., Developments in variational methods for high performance plate and shell elements, in *Analytical and Computational Models for Shells*, CED Vol. 3, ed. by A. K. Noor, T. Belytschko and J. C. Simo, The American Society of Mechanical Engineers, ASME, New York, 191–216, 1989.
- [93] Felippa, C. A., The extended free formulation of finite elements in linear elasticity, *J. Appl. Mech.*, **56**, 609–616, 1989.
- [94] Felippa, C. A., Parametrized multifield variational principles in elasticity: II. Hybrid functionals and the free formulation, *Comm. Appl. Numer. Meth.*, **5**, 79–88, 1989.
- [95] Felippa, C. A., Militello, C., Membrane triangles with corner drilling freedoms: II. The ANDES element, *Finite Elem. Anal. Des.*, **12**, 189–201, 1992.
- [96] Felippa, C. A. and Alexander, S., Membrane triangles with corner drilling freedoms: III. Implementation and performance evaluation, *Finite Elem. Anal. Des.*, **12**, 203–239, 1992.
- [97] Felippa, C. A., A survey of parametrized variational principles and applications to computational mechanics, *Comp. Meths. Appl. Mech. Engrg.*, **113**, 109–139, 1994.
- [98] Felippa, C. A., Haugen, B. and Militello, C., From the individual element test to finite element templates: evolution of the patch test. *Int. J. Numer. Meth. Engrg.*, **38**, 199–229, 1995.
- [99] Felippa, C. A., Parametrized unification of matrix structural analysis: classical formulation and d-connected mixed elements, *Finite Elem. Anal. Des.*, **21**, 45–74, 1995.
- [100] Felippa, C. A., Recent developments in parametrized variational principles for mechanics, *Comput. Mech.*, **18**, 159–174, 1996.
- [101] Felippa, C. A., Park, K. C., and Justino Filho, M. R., The construction of free-free flexibility matrices as generalized stiffness inverses, *Computers & Structures*, **88**, 411–418, 1997.
- [102] Felippa, C. A. and Park, K. C., A direct flexibility method, *Comp. Meths. Appl. Mech. Engrg.*, **149**, 319–337, 1997.
- [103] Felippa, C. A., Recent advances in finite element templates, Chapter 4 in *Computational Mechanics for the Twenty-First Century*, ed. by B.H.V. Topping, Saxe-Coburn Pubs., Edinburgh, 71–98, 2000.
- [104] Felippa, C. A., Customizing high performance elements by Fourier methods, *Trends in Computational Mechanics*, ed. by W. A. Wall et. al., CIMNE, Barcelona, Spain, 283-296, 2001.
- [105] Felippa, C. A., Web-posted Lectures on Advanced Finite Element Methods, at <http://caswww.colorado.edu/courses.d/AFEM.d/Home.html>, updated every two Spring semesters

- [106] Felippa, C. A., Web-posted Lectures on Introduction to Finite Element Methods, at <http://caswww.colorado.edu/courses.d/IFEM.d/Home.html>, updated each Fall semester
- [107] Felippa, C. A., Web-posted Lectures on Introduction to Finite Element Methods, at <http://caswww.colorado.edu/courses.d/NFEM.d/Home.html>, updated every two Spring semesters
- [108] Felippa, C. A., Customizing the mass and geometric stiffness of plane thin beam elements by Fourier methods, *Engrg. Comput.*, **18**, 286–303, 2001.
- [109] Felippa, C. A., A historical outline of matrix structural analysis: a play in three acts, *Computers & Structures*, **79**, 1313–1324, 2001.
- [110] Felippa, C. A. and Park, K. C., The construction of free-free flexibility matrices for multilevel structural analysis, *Comp. Meths. Appl. Mech. Engrg.*, **191**, 2111–2140, 2002.
- [111] Felippa, C. A., A study of optimal membrane triangles with drilling freedoms, *Comp. Meths. Appl. Mech. Engrg.*, **192**, 2125–2168, 2003.
- [112] Felippa, C. A., A template tutorial, Chapter 3 in *Computational Mechanics: Theory and Practice*, ed. by K. M. Mathisen, T. Kvamsdal and K. M. Okstad, CIMNE, Barcelona, 29–68, 2004.
- [113] Felippa, C. A., The amusing history of shear flexible beam elements, *IACM Expressions*, Issue 17, 15–19, 2005.
- [114] Felippa, C. A. and Oñate, E., Nodally exact Ritz discretizations of 1D diffusion-absorption and Helmholtz equations by variational FIC and modified equation methods, *Comput. Mech.*, 2006.
- [115] Fill, J. A. and Fishkind, D. E., The Moore-Penrose generalized inverse for sum of matrices, *SIAM J. Matrix Anal. Appl.*, **21**, 629–635, 1999.
- [116] Finlayson, B. M., *The Methods of Weighted Residuals and Variational Principles*, Academic Press, 1972.
- [117] Fjeld, S. A., A three-dimensional theory of elasticity, in *Finite Element Methods for Stress Analysis*, ed. by I. Holland and K. Bell, Tapir, Trondheim, Norway, 1968.
- [118] Flaggs, D. L., Symbolic analysis of the finite element method in structural mechanics, *Ph. D. Dissertation*, Dept of Aeronautics and Astronautics, Stanford University, 1988.
- [119] Flanagan, D. P. and Belytschko, T., A uniform strain hexahedron and quadrilateral with orthogonal hourglass control, *Int. J. Numer. Meth. Engrg.*, **17**, 679–706, 1981.
- [120] Flanders, H., *Differential Forms, With Applications to the Physical Sciences*, Dover, 1989.
- [121] Fletcher, C. A. J., *Computational Galerkin Methods*, Springer-Verlag, Berlin, 1984.
- [122] Flügge, W., *Stresses in Shells*, 2nd printing, Springer-Verlag, Berlin, 1973.
- [123] Forsyth, A. R., *Calculus of Variations*, Dover, 1960.
- [124] Fourier, J., *Theorie Analytique de la Chaleur*, Chez Firmin Didot, Père et Fils, Paris, 1822.
- [125] Fox, C., *An Introduction to the Calculus of Variations*, Oxford, 1963, in Dover since 1987
- [126] Fox, R. L. and Schmit, L. A., Advances in the integrated approach to structural synthesis, AIAA/ASME Material Conference, 1964.
- [127] Fraeijs de Veubeke, B. M., Diffusion des inconnues hyperstatiques dans les voilures à longeron couplés, *Bull. Serv. Technique de L'Aéronautique No. 24*, Imprimerie Marcel Hayez, Bruxelles, 1951.

- [128] Fraeijs de Veubeke, B. M., Upper and lower bounds in matrix structural analysis, in *AGARDograph 72: Matrix Methods of Structural Analysis*, ed. by B. M. Fraeijs de Veubeke, Pergamon Press, New York, 174–265, 1964.
- [129] Fraeijs de Veubeke, B. M., Displacement and equilibrium models, in *Stress Analysis*, ed. by O. C. Zienkiewicz and G. Hollister, Wiley, London, 145–197, 1965; reprinted in *Int. J. Numer. Meth. Engrg.*, **52**, 287–342, 2001.
- [130] Fraeijs de Veubeke, B. M., Stress function approach, *Proc. World Congr. on Finite Element Methods*, October 1975, Woodlands, England; reprinted in *B. M. Fraeijs de Veubeke Memorial Volume of Selected Papers*, ed. by M. Geradin, Sitthoff & Noordhoff, Alphen aan den Rijn, The Netherlands, 663–715, 1980.
- [131] Frazer R. A. and Duncan, W. J., *The Flutter of Airplane Wings*, Reports & Memoranda 1155, Aeronautical Research Committee, London, 1928.
- [132] Frazer, R. A., Duncan, W. J., and Collar, A. R., *Elementary Matrices, and some Applications to Dynamics and Differential Equations*, Cambridge Univ. Press, 1st ed. 1938, 7th (paperback) printing 1963.
- [133] Fried, I. and Malkus, D. S., Finite element mass lumping by numerical integration with no convergence rate loss, *Int. J. Solids Struc.*, **11**, 461–466, 1975.
- [134] Fung, Y. C., *Foundations of Solid Mechanics*, Prentice-Hall, 1965.

G

- [135] Gallaguer, R. H., Padlog, J., and Bijlard, P. P., Stress analysis of heated complex shapes, *J. Am. Rockets Soc.*, 700-707, 1962.
- [136] Gallaguer, R. H., *A Correlation Study of Methods of Matrix Structural Analysis*, Pergamon, Oxford, 1964.
- [137] Gantmacher, F. R., *The Theory of Matrices*, 2 vols, Chelsea, New York, 1960.
- [138] Garbow, B. S., Boyle, J. M., Dongarra, J. J., and Moler, C. B., Matrix Eigensystem Routines - EISPACK Guide Extension, Lecture Notes in Computer Science Vol. 51, Springer-Verlag, New York, 1986.
- [139] Gelfand, I. M. and Fomin, S. V., *Calculus of Variations*, Prentice-Hall, Englewood Cliffs, NJ, 1963; reprinted by Dover, 2000.
- [140] Geradin, M. and Rixen, D., *Mechanical Vibrations: Theory and Applications to Structural Dynamics*, Wiley, New York, 1997.
- [141] Glynn, J. and Gray, T. H., *The Beginner's Guide to Mathematica Version 4*, Cambridge Univ. Press, 1999.
- [142] Goldstine, H. H., *A History of Numerical Analysis*, Springer-Verlag, New York, 1977.
- [143] Golub, G. H. and Van Loan, C. F., *Matrix Computations*, Johns Hopkins Univ. Press, 2nd ed., 1983.
- [144] Graff, K. F., *Wave Motion in Elastic Solids*, Dover, New York, 1991.
- [145] Griffiths, D. F. and Mitchell, A. R., Nonconforming elements, in *The Mathematical Basis of Finite Element Methods*, ed. by D. F. Griffiths, Clarendon Press, Oxford, 41–70, 1984.
- [146] Griffiths, D. and Sanz-Serna, J., On the scope of the method of modified equations. *SIAM J. Sci. Statist. Comput.*, **7**, 994–1008, 1986.
- [147] Guggenheimer, H. W., *Differential Geometry*, Dover, 1977..

- [148] Gurtin, M., The Linear Theory of Elasticity, in *Encyclopedia of Physics* VIa, Vol II, ed. by C. Truesdell, Springer-Verlag, Berlin, 1–295, 1972; reprinted as *Mechanics of Solids* Vol II, Springer-Verlag, Berlin, 1984.
- [149] Guttman, R. J., Enlargement methods for computing the inverse matrix, *Ann. Math. Stat.*, **317**, 336–343, 1946.
- [150] Guyan, R. J., Reduction of stiffness and mass matrices, *AIAA J.*, **3**, 380, 1965.

H

- [151] Hager, W. W., Updating the inverse of a matrix, *SIAM Review*, **31**, 221–239, 1989.
- [152] Hairer, E., Backward analysis of numerical integrators and symplectic methods, *Annals Numer. Math.*, **1**, 107–132, 1994.
- [153] Hairer, E., Wanner, G., and Lubich, C., *Geometrical Numeric Integration: Structure-Preserving Algorithms for Ordinary Differential Equations*, Springer-Verlag, Berlin, 2002.
- [154] Hammer, P. C. and Stroud, A. H., Numerical integration over simplices, *Math. Tables Aids Comput.*, **10**, 137–139, 1956.
- [155] Hammer, P. C. and Stroud, A. H., Numerical evaluation of multiple integrals, *Math. Tables Aids Comput.*, **12**, 272–280, 1958.
- [156] Hamming, R. W., *Digital Filters*, Dover, New York, 3rd ed., 1998.
- [157] Hamming, R. W., *Numerical Methods for Scientists and Engineers*, Dover, New York, 2nd ed., 1973.
- [158] Hammond, P., *Energy Methods in Electromagnetics*, Clarendon Press, Oxford, 1981.
- [159] Hanssen, L., Bergan, P. G., and Syversten, T. J., Stiffness derivation based on element convergence requirements, in *The Mathematics of Finite Elements and Applications – Volume III*, ed. by J. R. Whiteman, Academic Press, London, 83–96, 1979.
- [160] Hardy, G. H., *Divergent Series*, American Mathematical Society, Providence, 1991 (reprint of 1949 Oxford edition).
- [161] Haugen, B., Buckling and stability problems for thin shell structures using high performance finite elements, *Ph. D. Dissertation*, Dept. of Aerospace Engineering Sciences, Univ. of Colorado, Boulder, CO, 1994.
- [162] Havner, K. S., The theory of finite plastic deformations in chrystalline solids, in *Mechanics of Solids – The Rodney Hill 60th Anniversary Volume*, ed. by H. G. Hopkins and M. J. Sewell, Pergamon Press, Oxford, 265–302, 1982.
- [163] Haynsworth, E. V., On the Schur complement, *Basel Mathematical Notes*, #BMN20, **20**, 17pp, 1968.
- [164] Haynsworth, E. V., Determination of the inertia of a partitioned Hermitian matrix, *Lin. Alg. Appl.*, **1**, 73–81, 1968.
- [165] Haynsworth, E. V. and Ostrowski, A., On the inertia of some classes of partitioned matrices, *Lin. Alg. Appl.*, **1**, 299–301, 1968.
- [166] Henderson, H. V., and Searle S. R., On deriving the inverse of a sum of matrices, *SIAM Review*, **23**, 53–60, 1981.
- [167] Herrmann, L. R., Elasticity equations for nearly incompressible materials by a variational theorem, *AIAA J.*, **3**, 1896–1900, 1965.

- [168] Herrmann, L. R., A bending analysis for plates, in *Proceedings 1st Conference on Matrix Methods in Structural Mechanics*, AFFDL-TR-66-80, Air Force Institute of Technology, Dayton, Ohio, 577–604, 1966.
- [169] Hestenes, M. R., Multiplier and gradient methods, *J. Opt. Theory Appl.*, **4**, 303–320, 1969.
- [170] Hetenyi, M., *Beams on Elastic Foundation: Theory with Applications in the Fields of Civil and Mechanical Engineering*, Univ. of Michigan Press, 1946; 8th printing, 1967.
- [171] Hildebrand, F. B., *Introduction to Numerical Analysis*, Dover, 2nd ed., 1987; 1st ed., McGraw-Hill, 1974.
- [172] Hill, R., On constitutive equations for simple materials, *J. Mech. Phys. Solids*, **15**, 229–242, 1968.
- [173] Hill, R., Aspects of invariance in solid mechanics, in *Advances in Applied Mechanics*, ed. by C. S. Yih, **18**, 1–75, 1978.
- [174] Hinton, E., Rock T. and Zienkiewicz, O. C., A note on mass lumping and related processes in the finite element method, *Earthquake Engrg. Struc. Dynamics*, **4**, 245–249, 1976.
- [175] Horn, R. A. and Johnson, C. R., *Matrix Analysis*, Cambridge University Press, 1991. Corrected reprint edition 1990.
- [176] Horn, R. A. and Johnson, C. R., *Topics in Matrix Analysis*, Cambridge University Press, 1991. Corrected reprint edition 1994.
- [177] Householder, A. S., *The Theory of Matrices in Numerical Analysis*, Glinn/Blaisdell, 1964; Dover reprint 1975.
- [178] Hrenikoff, A., Solution of problems in elasticity by the framework method, *J. Appl. Mech.*, **8**, A169–A175, 1941.
- [179] Huang, H. C. and Hinton, E., A new nine node degenerated shell element with enhanced membrane and shear interpolation, *Int. J. Numer. Meth. Engrg.*, **22**, 73–92, 1986.
- [180] Hughes, T. J. R. and Malkus, D. S., Mixed finite element methods – reduced and selective integration techniques: a unification of concepts, *Comp. Meths. Appl. Mech. Engrg.*, bf 15, 63–81, 1978.
- [181] Hughes, T. J. R. and Cohen, M., The Heterosis finite element for plate bending, *Computers & Structures*, **9**, 445–450, 1980.
- [182] Hughes, T. J. R., Generalization of selective integration procedures to anisotropic and nonlinear media, *Int. J. Numer. Meth. Engrg.*, **15**, 1413–148, 1980.
- [183] Hughes, T. J. R. and D. S. Malkus, D. S., A general penalty mixed equivalence theorem for anisotropic, incompressible finite elements, in *Hybrids and Mixed Finite Element Methods*, ed. by S. N. Atluri, R. H. Gallagher and O. C. Zienkiewicz, Wiley, London, 1983.
- [184] Hughes, T. J. R., *The Finite Element Method: Linear Static and Dynamic Finite Element Analysis*, Prentice Hall, Englewood Cliffs, NJ, 1987; Dover reprint, 2000.

I

- [185] Irons, B. M. and Draper, K., Inadequacy of nodal connections in a stiffness solution for plate bending, *AIAA J.*, **3**, 965–966, 1965.
- [186] Irons, B. M., Engineering application of numerical integration in stiffness methods, *AIAA J.*, **4**, 2035–2037, 1966.

- [187] Irons, B. M. and A. Razzaque, A., Experiences with the patch test for convergence of finite elements, in *The Mathematical Foundations of the Finite Element Method with Applications to Partial Differential Equations*, ed. by A. K. Aziz, Academic Press, New York, 557–587, 1972.
- [188] Irons, B. M. and Barlow, J., Comments on ‘matrices for the direct stiffness method’ by R. J. Melosh, *AIAA J.*, **2**, 403, 1964.
- [189] Irons, B. M., A frontal solution program for finite element analysis, *Int. J. Numer. Meth. Engrg.*, **12**, 5–32, 1970.
- [190] Irons, B. M. and Ahmad, S., *Techniques of Finite Elements*, Ellis Horwood Ltd, Chichester, UK, 1980.
- [191] Irons, B. M. and Loikannen, M., An engineer’s defense of the patch test, *Int. J. Numer. Meth. Engrg.*, **19**, 1391–1401, 1983.
- [192] Irvine, M., *Cable Structures*, Dover, 1992. Reprint of 1st ed., MIT Press, 1981.

J

- [193] Jones, H., *The Theory of Brillouin Zones and Electronic States in Crystals*, North Holland, Amsterdam, 1960.

K

- [194] Kavanagh, K. and Key, S. W., A note on selective and reduced integration techniques in the finite element method, *Int. J. Numer. Meth. Engrg.*, **4**, 148–150, 1972.
- [195] Krieg, R. D. and Key, S. W., Transient shell analysis by numerical time integration, in *Advances in Computational Methods for Structural Mechanics and Design*, ed. by J. T. Oden, R. W. Clough and Y. Yamamoto, UAH Press, Huntsville, Alabama, 237–258, 1972.
- [196] Knuth, D. E., *The T_EXbook*, Addison-Wesley, Reading, MA, 1984.
- [197] G. Kron, Tensorial analysis and equivalent circuits of elastic structures, *J. Franklin Inst.*, **238**, 399–442, 1944.

L

- [198] Lagrange, J. L., *Mécanique Analytique*, Chez la veuve Desaint, Paris, 1788; Édition complète, 2 vols., Blanchard, Paris, 1965.
- [199] Lancaster, P. and Tismenetsky M., *The Theory of Matrices*, Academic Press, Orlando, 2nd ed., 1985.
- [200] Lanczos, C., *The Variational Principles of Mechanics*, Dover, 4th edition, 1970. (First edition 1949).
- [201] Langhaar, H. L., *Energy Methods in Applied Mechanics*, Wiley, New York, 1962.
- [202] Lautersztajn-S, N. and Samuelsson, A., Further discussion on four-node isoparametric elements in plane bending, *Int. J. Numer. Meth. Engrg.*, **47**, 129–140, 2000.
- [203] Levy, S., Computation of influence coefficients for aircraft structures with discontinuities and sweep-back, *J. Aero. Sci.*, **14**, 547–560, 1947.
- [204] Levy, S., Structural analysis and influence coefficient for delta wings, *J. Aero. Sci.*, **20**, 449–454, 1953.
- [205] Livesley, R. K., *Matrix Methods of Structural Analysis*, Pergamon Press, London, 1964.

- [206] Loikannen, M. J. and Irons, B. M., An 8-node brick finite element, *Int. J. Numer. Meth. Engrg.*, **20**, 523–528, 1984.

M

- [207] MacNeal, R. H. (ed.), *The NASTRAN Theoretical Manual*, NASA SP-221, 1970.
- [208] MacNeal, R. H. and McCormick, C. W., The NASTRAN computer program for structural analysis, *Computers & Structures*, **1**, 389–412, 1971.
- [209] MacNeal, R. H., Derivation of element stiffness matrices by assumed strain distribution, *Nuclear Engrg. Design*, **70**, 3–12, 1978.
- [210] MacNeal, R. H., A simple quadrilateral shell element, *Computers & Structures*, **8**, 175–183, 1978.
- [211] MacNeal, R. H., The evolution of lower order plate and shell elements in MSC/NASTRAN, in Hughes, T. J. R. and E. Hinton (eds.), *Finite Element Methods for Plate and Shell Structures, Vol. I: Element Technology*, Pineridge Press, Swansea, U.K., 85–127, 1986.
- [212] MacNeal, R. H. and Harder, R. L., A proposed standard set of problems to test finite element accuracy, *Finite Elem. Anal. Des.*, **1**, 3–20, 1985.
- [213] MacNeal, R. H., A theorem regarding the locking of tapered four noded membrane elements, *Int. J. Numer. Meth. Engrg.*, **24**, 1793–1799, 1987.
- [214] MacNeal, R. H., On the limits of finite element perfectibility, *Int. J. Numer. Meth. Engrg.*, **35**, 1589–1601, 1992.
- [215] MacNeal, R. H., *Finite Elements: Their Design and Performance*, Marcel Dekker, New York, 1994.
- [216] Malkus, D. S. and Plesha, M. E., Zero and negative masses in finite element vibration and transient analysis, *Comp. Meths. Appl. Mech. Engrg.*, **59**, 281–306, 1986.
- [217] Malkus, D. S., Plesha, M. E., and Liu, M. R., Reversed stability conditions in transient finite element analysis, *Comp. Meths. Appl. Mech. Engrg.*, **68**, 97–114, 1988.
- [218] Martin, H. C., On the derivation of stiffness matrices for the analysis of large deflection and stability problems, in *Proc. 1st Conf. on Matrix Methods in Structural Mechanics*, ed. by J. S. Przemieniecki et al, AFFDL-TR-66-80, Air Force Institute of Technology, 697–716, 1966.
- [219] Martin, H. C., *Introduction to Matrix Methods of Structural Analysis*, McGraw-Hill, New York, 1966.
- [220] Martin, H. C. and Carey, G. F., *Introduction to Finite Element Analysis*, McGraw-Hill, New York, 1973.
- [221] McHenry, D., A lattice analogy for the solution of plane stress problems, *J. Inst. Civ. Engrs.*, **21**, 59–82, 1943.
- [222] Meirovitch, L., *Methods of Analytical Dynamics*, McGraw-Hill, New York, 1970.
- [223] Meirovitch, L., *Computational Methods in Structural Dynamics*, Kluwer Acad. Pubs, 1980.
- [224] Melosh, R. J. and Merritt, R. G., Evaluation of spar matrices for stiffness analysis, *J. Aero. Sci.*, **25**, 537–543, 1959.
- [225] Melosh, R. J., A stiffness matrix for the analysis of thin plates in bending, *J. Aero. Sci.*, **28**, 34–40, 1961.
- [226] Melosh, R. J., Development of the stiffness method to define bounds on the elastic behavior of structures, *Ph.D. Dissertation*, University of Washington, Seattle, 1962.

- [227] Melosh, R. J., Bases for the derivation of matrices for the direct stiffness method, *AIAA J.*, **1**, 1631–1637, 1963.
- [228] Melosh, R. J., Structural analysis of solids, *J. ASCE Struct. Div.*, **ST4-89**, 205–223, 1963.
- [229] Melosh, R. J., A flat triangular shell element stiffness matrix, Proc. Conf. on Matrix Methods in Structural Mechanics, WPAFB, Ohio, 1965, in *AFFDL TR 66-80*, 503–509, 1966.
- [230] Militello, C. and C. A. Felippa, C. A., The individual element patch revisited, in *The Finite Element Method in the 1990's — a book dedicated to O. C. Zienkiewicz*, ed. by E. Oñate, J. Periaux and A. Samuelsson, CIMNE, Barcelona and Springer-Verlag, Berlin, 554–564, 1990.
- [231] Militello, C. and Felippa, C. A., The First ANDES Elements: 9-DOF Plate Bending Triangles, *Comp. Meths. Appl. Mech. Engrg.*, **93**, 217–246, 1991.
- [232] Misner, C. W., , Thorne, K., and Wheeler, J. A., *Gravitation*, W. H. Freeman, San Francisco, 1973.
- [233] Möbius, A.F., *Der Barycentrische Calcul*, Georg Olms, Hildesheim, Germany, 1976. Original edition: Leipzig, Germany, 1827.
- [234] Morley, L. S. D., The constant-moment plate bending element, *J. Strain Analysis*, **6**, 20–24, 1971.
- [235] Morse, P. M. and Feshbach, H., *Methods of Theoretical Physics*, 2 vols, McGraw-Hill, 1953.
- [236] Muir, T., (Sir), *Theory of Determinants*, Dover, New York, 1960.

N

- [237] Nygård, M. K., The Free Formulation for nonlinear finite elements with applications to shells, *Ph. D. Dissertation*, Division of Structural Mechanics, NTH, Trondheim, Norway, 1986.

O

- [238] Oden, J. T., *Finite Elements of Nonlinear Continua*, McGraw-Hill, New York, 1972.
- [239] Oden, J. T. and Reddy, J. N., *Variational Methods in Theoretical Mechanics*, Springer-Verlag, Berlin, 1982.
- [240] Ostrowski, A., A new proof of Haysnworth's quotient formula for Schur complements, *Lin. Alg. Appl.*, **4**, 389–392, 1971.
- [241] Ostrowski, A., On Schur's complement, *J. Combin. Theory Series A*, **14**, 319–323, 1973.
- [242] Özişik, M. N., *Boundary Value Problems of Heat Conduction*, Dover edition, 1989.

P

- [243] Park, K. C., Symbolic Fourier analysis procedures for C^0 finite elements, in *Innovative Methods for Nonlinear Problems*, ed. by W.K. Liu, T. Belytschko and K. C. Park, Pineridge Press, Swansea, UK, 269–293, 1984.
- [244] Park, K. C. and Flaggs, D. L., A Fourier analysis of spurious modes and element locking in the finite element method, *Comp. Meths. Appl. Mech. Engrg.*, **42**, 37–46, 1984.
- [245] Park, K. C. and Flaggs, D. L., An operational procedure for the symbolic analysis of the finite element method, *Comp. Meths. Appl. Mech. Engrg.*, **46**, 65–81, 1984.
- [246] Park, K. C. and Stanley, G. M., A curved C^0 shell element based on assumed natural-coordinate strains, *J. Appl. Mech.*, **53**, 278–290, 1986.

- [247] Parlett, B. N., *The Symmetric Eigenvalue Problem*, Prentice-Hall, 1980. Reprinted by SIAM Publications, 1998.
- [248] Pawsey, S. F. and Clough, R. W., Improved numerical integration of thick shell finite elements, *Int. J. Numer. Meth. Engrg.*, **3**, 545–586, 1971.
- [249] Peano, A., Hierarchics of conforming elements for elasticity and plate bending, *Comput. Math. Appl.*, **2**, 3–4, 1976.
- [250] Pestel, E. C. and Leckie, F. A., *Matrix Methods in Elastomechanics*, McGraw-Hill, New York, 1963.
- [251] Pian, T. H. H., Derivation of element stiffness matrices by assumed stress distributions, *AIAA J.*, **2**, 1333–1336, 1964.
- [252] Pian, T. H. H., Element stiffness matrices for boundary compatibility and for prescribed boundary stresses, in *Proc. 1st Conf. on Matrix Methods in Structural Mechanics*, AFFDL-TR-66-80, Air Force Institute of Technology, Dayton, Ohio, 457–478, 1966.
- [253] Pian, T. H. H. and Tong, P., Basis of finite element methods for solid continua, *Int. J. Numer. Meth. Engrg.*, **1**, 3–29, 1969.
- [254] Pian, T. H. H. and Sumihara, K., Rational approach for assumed stress finite elements, *Int. J. Numer. Meth. Engrg.*, **20**, 1685–1695, 1984.
- [255] Pian, T. H. H. and Tong, P., Relations between incompatible displacement model and hybrid stress model, *Int. J. Numer. Meth. Engrg.*, **22**, 173–181, 1986.
- [256] Pian, T. H. H., Some notes on the early history of hybrid stress finite element method, *Int. J. Numer. Meth. Engrg.*, **47**, 419–425, 2000.
- [257] Popov, E. P., *Engineering Mechanics of Solids*, Prentice Hall, Englewood Cliffs, N. J., 2nd ed., 1991.
- [258] Powell, M. J. D., A method for nonlinear constraints in optimization problems, in *Optimization*, ed. by R. Fletcher, Academic Press, London, 283–298, 1969.
- [259] Prager, W. and Synge, J. L., Approximations in elasticity based on the concept of function space, *Quart. Appl. Meth.*, **5**, 241–269, 1947.
- [260] Press, W. J. et al., *Numerical Recipes: The Art of Scientific Computing*, 2nd ed., Cambridge Univ. Press, 1992.
- [261] Przemieniecki, J. S., *Theory of Matrix Structural Analysis*, McGraw-Hill, New York, 1968; Dover edition 1986.
- [262] Punch, E. F. and Atluri, S. N., Applications of isoparametric three-dimensional hybrid stress elements with least-order fields, *Computers & Structures*, **19**, 406–430, 1984.
- [263] Punch, E. F. and Atluri, S. N., Development and testing of stable, invariant, isoparametric curvilinear 2- and 3D hybrid stress elements, *Comp. Meths. Appl. Mech. Engrg.*, **47**, 331–356, 1984.

Q**R**

- [264] Raimes, S., *The Wave Mechanics of Electrons in Metals*, North-Holland, Amsterdam, 1967.
- [265] Rand, T., An approximate method for computation of stresses in sweptback wings, *J. Aero. Sci.*, **18**, 61–63, 1951.

- [266] Rankin, C. C., Brogan, F. A., Loden, W. A., and Cabiness, H., *STAGS User Manual*, Lockheed Mechanics, Materials and Structures Report P032594, Version 3.0, 1998.
- [267] Rao, C. R. and Mitra, S. K., *Generalized Inverse of Matrices and its Applications*, Wiley, New York, 1971.
- [268] Rashid, Y. S., Three dimensional analysis of elastic solids: I. Analysis procedure, *Int. J. Solids Struc.*, **5**, 1311–1331, 1969.
- [269] Rashid, Y. S., Three dimensional analysis of elastic solid: II. The computational problem, *Int. J. Solids Struc.*, **6**, 195–207, 1970.
- [270] Razzaque, A., Program for triangular bending elements with derivative smoothing, *Int. J. Numer. Meth. Engrg.*, **6**, 333–343, 1973.
- [271] Reddy, J. N., *Energy and Variational Methods in Applied Mechanics*, Wiley, 1986.
- [272] Reissner, E., On a variational theorem in elasticity, *J. Math. Phys.*, **29**, 90–95, 1950.
- [273] Roark, R. J., Budynas, R. G., and Young, W. C., *Roark's Formulas for Stress and Strain*, McGraw-Hill, New York, 7th ed., 2001.
- [274] Robinson, J., *Structural Matrix Analysis for the Engineer*, Wiley, New York, 1966.
- [275] Robinson, J., *EarlyFEM Pioneers*, Robinson and Associates, Dorset, 1966.
- [276] Ruskeepaa, H. *Mathematica Navigator: Mathematics, Statistics, and Graphics*, Academic Press, 2004.
- [277] Ruskeepaa, H., *Mathematica Navigator: Graphics and Methods of Applied Mathematics*, Academic Press, 2004.

S

- [278] Sander, G. and Beckers, P. The influence of the choice of connectors in the Finite Element Method, in *The Mathematical Aspects of the Finite Element Method*, Lecture Notes in Mathematics, Vol. 606, Springer-Verlag, Berlin, 316ff, 1977.
- [279] Santilli, R., *Foundations of Theoretical Mechanics I*, Springer-Verlag, Berlin, 1978.
- [280] Schuerch, H. U., Delta wing design analysis, presented at the *Natl. Aeron. Meeting*, Soc. Autom. Engrg, Preprint 441, Los Angeles, 1953. Translated into English:
- [281] Schur, I., Über Potenzenreihen, die im Innern des Einheitskreises beschränkt sind [I]., *J. Reine Angew. Math.*, **147**, 205–232, 1917. English translation: in On power series which are bounded in the interior of the unit circle, in *Schur Methods in Operator Theory and Signal Processing. Operator Theory: Advances and Applications OT18*, ed. by I. Gohberg, Birkäuser Verlag, Basel, 31–59 and 61–88, 1986.
- [282] Sewell, M. J., *Maximum and Minimum Principles*, Cambridge, 1987.
- [283] Sherman, J. and Morrison, W. J., Adjustment of an inverse matrix corresponding to changes in the elements of a given column or a given row of the original matrix, *Ann. Math. Stat.*, **20**, 621, 1949; also: Adjustments of an inverse matrix corresponding to a change in one element of a given matrix, *Ann. Math. Stat.*, **21**, 124, 1950.
- [284] Simo, J. C. and Rifai, M. S., A class of mixed assumed strain methods and the method of incompatible modes, *Int. J. Numer. Meth. Engrg.*, **29**, 1595–1638, 1990.
- [285] Simo, J. C. and Hughes, T. J. R., On the variational foundations of assumed strain methods, *J. Appl. Mech.*, **53**, 51–54, 1986.

- [286] Simo, J. C. and Rifai, M. S., A class of mixed assumed strain methods and the method of incompatible modes, *Int. J. Numer. Meth. Engrg.*, **29**, 1595–1638, 1990.
- [287] Skeie, G., The Free Formulation: linear theory and extensions with applications to tetrahedral elements with rotational freedoms, *Ph. D. Dissertation*, Division of Structural Mechanics, NTH, Trondheim, Norway, 1991.
- [288] Sokolnikoff, I., *The Mathematical Theory of Elasticity*, McGraw-Hill, 2nd ed., 1956.
- [289] Sortais, Y. R., *La Géométrie du Triangle*, Hermann, Paris, 1987.
- [290] Spilker, R. and Singh, S. P., Three-dimensional hybrid-stress isoparametric quadratic displacement elements, *Int. J. Numer. Meth. Engrg.*, **18**, 445–465, 1982.
- [291] Stanley, G. M., Park, K. C., and Hughes, T. J. R., Continuum based resultant shell elements, in T. J. R. Hughes and E. Hinton (eds.), *Finite Element Methods for Plate and Shell Structures, Vol. I: Element Technology*, Pineridge Press, Swansea, U.K., 1986, 1–45.
- [292] Stewart, G. W., *Introduction to Matrix Computations*, Academic Press, New York, 1973.
- [293] Stewart, G. W. and Sun, J. G., *Matrix Perturbation Theory*, Academic Press, Boston, 1990.
- [294] Strang, G., Variational crimes in the finite element method, in *The Mathematical Foundations of the Finite Element Method with Applications to Partial Differential Equations*, ed. by A. K. Aziz, Academic Press, New York, 689–710, 1972.
- [295] Strang, G. and Fix, G., *An Analysis of the Finite Element Method*. Prentice-Hall, 1973.
- [296] Strang, G., *Linear Algebra and its Applications*, Academic Press, New York, 1976.
- [297] Stroud, A. H. and Secrest, D., *Gaussian Quadrature Formulas*, Prentice-Hall, Englewood Cliffs, NJ, 1966.
- [298] Stroud, A. H., *Approximate Calculation of Multiple Integrals*, Prentice-Hall, Englewood Cliffs, NJ, 1971.
- [299] Struik, D. J., *Lectures in Classical Differential Geometry*, Addison-Wesley, 2nd ed., 1961.
- [300] Stuart, A. M. and Humphries, A. R., *Dynamic Systems and Numerical Analysis*, Cambridge Univ. Press, Cambridge, 1996.
- [301] Stummel, F., The limitations of the patch test, *Int. J. Numer. Meth. Engrg.*, **15**, 177–188, 1989.
- [302] Stummel, F., The generalized patch test, *SIAM J. Numer. Anal.*, **16**, 449–471, 1979.
- [303] Synge, J. R. *The Hypercircle in Mathematical Physics*, Cambridge Univ. Press, Cambridge, 1957.
- [304] Szabo, B. and Babuska, I., *Finite Element Analysis*, Wiley, New York, 1991.

T

- [305] Taig, I. C. and Kerr, R. I., Some problems in the discrete element representation of aircraft structures, in *Matrix Methods of Structural Analysis*, ed. by B. M. Fraeijs de Veubeke, Pergamon Press, London, 1964.
- [306] Taylor, R. L., Pister, K. S., and Herrmann, L. R., A variational principle for incompressible and nearly incompressible orthotropic elasticity, *Int. J. Solids Struc.*, **4**, 875–883, 1968.
- [307] Taylor, R. L., Wilson, E. L., and Beresford, P. J., A nonconforming element for stress analysis, *Int. J. Numer. Meth. Engrg.*, **10**, 1211–1219, 1976.

- [308] Taylor, R. L., Simo, J. C., Zienkiewicz, O. C., and Chan, A. C., The patch test: a condition for assessing FEM convergence, *Int. J. Numer. Meth. Engrg.*, **22**, 39–62, 1986.
- [309] Tessler, A. and Hughes, T. J. R., A three-node Mindlin plate element with improved transverse shear, *Comp. Meths. Appl. Mech. Engrg.*, **50**, 71–101, 1985.
- [310] Timoshenko, S. P., On the correction for shear of the differential equation for transverse vibration of prismatic bars, *Phil. Mag.*, **XLI**, 744–46, 1921. Reprinted in *The Collected Papers of Stephen P. Timoshenko*, McGraw-Hill, London, 1953. See also S. P. Timoshenko and D. H. Young, *Vibration Problems in Engineering*, 3rd edition, Van Nostrand, 329–331, 1954.
- [311] Timoshenko, S. P., *Theory of Elastic Stability*, McGraw-Hill, New York, 1936.
- [312] Timoshenko, S. P. and Goodier, J. N., *Theory of Elasticity*, McGraw-Hill, New York, 1951.
- [313] Timoshenko, S. P. and Young, D. N., *Vibration Problems in Engineering*, Van Nostrand, Princeton, N.J., 1955.
- [314] Timoshenko, S. P. and Woinowsky-Krieger, S., *Theory of Plates and Shells*, McGraw-Hill, New York, 1959.
- [315] Tocher, J. L., Analysis of plate bending using triangular elements, *Ph. D. Dissertation*, Dept. of Civil Engineering, Univ. of California, Berkeley, CA, 1962.
- [316] Tocher, J. L. and Kapur, K. K., Discussion of ‘Basis for derivation of matrices for the direct stiffness method’ by R. J. Melosh, *AIAA J.*, **3**, 1215–1216, 1965.
- [317] Tocher, J. L. and Herness, E. D., A critical view of NASTRAN, in: *Numerical and Computer Codes in Structural Mechanics*, ed. by S. J. Fenves, N. Perrone, A. R. Robinson, and W. C. Schnobrich, Academic Press, New York, 151–173, 1973.
- [318] Tong, P., Exact solution of certain problems by the finite element method, *AIAA J.*, **7**, 179–180, 1969.
- [319] Tonti, E., The reason for analogies between physical theories, *Appl. Math. Model.*, **1**, 37–50, 1977.
- [320] Truesdell, C. and Toupin, R. A., The classical field theories, in S. Flügge (ed.), *Handbuch der Physik*, vol. III/1, 226–790, Springer-Verlag, Berlin, 1960.
- [321] Truesdell, C., *The Tragical History of Thermodynamics*, Springer-Verlag, Berlin, 1980.
- [322] Turnbull, H. W., *Theory of Determinants, Matrices and Invariants*, Blackie and Son, London, 1928. Expanded reprint by Dover, 1960.
- [323] Turner, M. J., Clough, R. W., Martin, H. C., and Topp, L. J., Stiffness and deflection analysis of complex structures, *J. Aero. Sci.*, **23**, 805–824, 1956.
- [324] Turner, M. J., The direct stiffness method of structural analysis, Structural and Materials Panel Paper, AGARD Meeting, Aachen, Germany, 1959.
- [325] Turner, M. J., Dill, E. H., Martin, H. C., and Melosh, R.J., Large deflection analysis of complex structures subjected to heating and external loads, *J. Aero. Sci.*, **27**, 97–107, 1960.
- [326] Turner, M. J., Martin, H. C., Weikel, R. C., Further development and applications of the stiffness method, in *AGARDograph 72: Matrix Methods of Structural Analysis*, ed. by B. M. Fraeijs de Veubeke, Pergamon Press, New York, 203–266, 1964.

- [327] Utku, S., Stiffness matrices for thin triangular elements of nonzero Gaussian curvature, *AIAA J.*, **37**, 1659–1667, 1967.

V

- [328] Vainberg, M. M., *Variational Methods for the Study of Nonlinear Operators*, Holden-Day, 1964.
- [329] Venkayya, V. B., Khot, N. S. and Reddy, V. S., Optimization of structures based on the study of energy distribution, in *Proceedings 2nd Conference on Matrix Methods in Structural Mechanics*, ed. by L. Berke et. al., AFFDL-TR-68-150, Air Force Institute of Technology, Dayton, Ohio, 111–154, 1968.
- [330] Vujanovic, B. D. and S. E. Jones, S. E., *Variational Methods in Nonconservative Phenomena*, Academic Press, 1989.

W

- [331] Wachpress, E. I., *A Rational Finite Element Basis*, Academic Press, NY, 1975.
- [332] Waltz, J. E., Fulton, R. E., and Cyrus, N. J., Accuracy and convergence of finite element approximations, *Proc. Second Conf. on Matrix Methods in Structural Mechanics*, WPAFB, Ohio, Sep. 1968, in *AFFDL TR 68-150*, 995–1028, 1968
- [333] Walhlbin, L. B., *Superconvergence in Galerkin Finite Element Methods*, Lecture Notes in Mathematics 1605, Springer-Verlag, Berlin, 1995.
- [334] Warming, R. F. and Hyett, B. J., The modified equation approach to the stability and accuracy analysis of finite difference methods, *J. Comp. Physics*, **14**, 159–179, 1974.
- [335] Washizu, K., *Variational Methods in Elasticity and Plasticity*, Pergamon Press, 1972. (2nd expanded edition 1981).
- [336] Weinstock, R., *Calculus of Variations, with Applications to Physics and Engineering*, McGraw-Hill, 1952. In Dover edition since 1974.
- [337] Weisstein, E. W., *CRC Concise Encyclopedia of Mathematics*, Chapman-Hall CRC, 2nd ed., 2002.
- [338] Wilf, H. S., *Generatingfunctionology*, Academic Press, New York, 1991.
- [339] Wilkinson, J. H., *The Algebraic Eigenvalue Problem*, Oxford Univ. Press, New York, 1965.
- [340] Wilkinson, J. H. and C. H. Reinsch, C. H. (eds.), *Handbook for Automatic Computation. Linear Algebra*, vol 2., Springer-Verlag, Berlin, 1971.
- [341] Willam, K. J., Finite element analysis of cellular structures, *Ph. D. Dissertation*, Dept. of Civil Engineering, Univ. of California, Berkeley, CA, 1969.
- [342] Wilson, E. L., Finite element analysis of two-dimensional structures, *Ph. D. Dissertation*, Department of Civil Engineering, University of California at Berkeley, 1963.
- [343] Wilson, E. L., Taylor, R. L., Doherty, W. P., and Ghaboussi, J., Incompatible displacement models, in *Numerical and Computer Models in Structural Mechanics*, ed. by S. J. Fenves, N. Perrone, A. R. Robinson, and W. C. Schnobrich, Academic Press, New York, 43–57, 1973.
- [344] Wilson, E. L., The static condensation algorithm, *Int. J. Numer. Meth. Engrg.*, **8**, 198–203, 1978.
- [345] Wilson, E. L., Automation of the finite element method — a historical view, *Finite Elem. Anal. Des.*, **13**, 91–104, 1993.
- [346] Wilson, E. L., *Three Dimensional Static and Dynamic Analysis of Structures: A Physical Approach with Emphasis on Earthquake Engineering*, Computers & Structures, Inc., 1998.

- [347] Wimp, J., *Sequence Transformations and Their Applications*, Academic Press, New York, 1981.
- [348] Wolfram, S., *The Mathematica Book*, Wolfram Media Inc., 4th ed. 1999. (Last edition in print).
- [349] Woodbury, M., Inverting modified matrices, Memorandum Report 42, Statistical Research Group, Princeton University, Princeton, NJ, 1950.
- [350] Wu, C. C. and Cheung, Y. K., On optimization approaches of hybrid stress elements, *Finite Elem. Anal. Des.*, **21**, 111–128, 1995.

X**Y**

- [351] Yourgrau W. and Mandelstam, S., *Variational Principles in Dynamics and Quantum Theory*, Dover, New York, 1968.

Z

- [352] Zhang, F. (ed.), *The Schur Complement and Its Applications*, Springer-Verlag, New York, 2005.
- [353] Zienkiewicz, O. C. and Cheung, Y. K., Finite elements in the solution of field problems, *The Engineer*, 507–510, 1965.
- [354] Zienkiewicz, O. C. and Cheung, Y. K., *The Finite Element Method in Engineering Science*, McGraw-Hill, London, 1967.
- [355] Zienkiewicz, O. C., Taylor, R. L., and Too, J. M., Reduced integration technique in general analysis of plates and shells, *Int. J. Numer. Meth. Engrg.*, **3**, 275–290, 1971.
- [356] Zienkiewicz, O. C., Finite elements: the background story, in *The Mathematics of Finite Elements and Applications*, ed. by J. R. Whiteman, Academic Press, NY, 1973.
- [357] Zienkiewicz, O. C., *The Finite Element Method*, 3rd ed., McGraw-Hill, London, 1977.
- [358] Zienkiewicz, O. C. and Taylor, R. E., *The Finite Element Method*, 4th ed., McGraw-Hill, London, Vol. I: 1988, Vol II: 1993.
- [359] Zienkiewicz, O. C., preface to reprint of B. M. Fraeijs de Veubeke’s “Displacement and equilibrium models” in *Int. J. Numer. Meth. Engrg.*, **52**, 287–342, 2001. Reprint available from <http://www3.interscience.wiley.com/cgi-bin/fulltext/85006363/PDFSTART>
- [360] Ziman, J. M., *Principles of the Theory of Solids*, North-Holland, Amsterdam, 1967.

===== Unsorted references follow =====

- [361] Atluri, S. N., and Reissner, E., On the formulation of variational theorems involving volume constraints, *Comput. Mech.*, **5**, 337–344, 1989.
- [362] Atluri, S. N. , On “hybrid” finite-element models in solid mechanics, In: *Advances in Computer Methods for Partial Differential Equations*. Ed. by R. Vichnevetsky, AICA, Rutgers University, 1975, 346–356.
- [363] Argyris, J. H. and Bronlund, O. E., The natural factor formulation of the stiffness matrix displacement method, *Comp. Meths. Appl. Mech. Engrg.*, **5**, 97–119, 1975.

- [364] Argyris, J. H. and Mlejnek, H.-P. , *Die Methode der Finiten Elemente, Vol. I-III*, Vieweg, Braunschweig, 1986, 1987 and 1988.
- [365] D'Alembert, J. L., *Traité de Dynamique*, Paris, 1743. Reprinted by Gauthier-Villars, Paris, 1921; available from Google as eBook.
- [366] D'Alembert, J. L., *Traité de l'Équilibre et du Movement des Fluides pour servir de suite au Traité de Dynamique*, Paris, 2nd. ed., 1770; downloadable from European Cultural Heritage Online (ECHO).
- [367] Euler, L., *Theoria Motus Corporum Solidorum seu Rigidrum ex Primis nostrae Cognitionis Principiis Stabilita et ad Omnis Motus, qui in hujusmodi Corpora Cadere Possunt*, 1765. Reprinted in *L. Euler Opera Omnia*, 3-4, 3-293, Natural Science Society, Berne, 1911-82.
- [368] Farhat, C. and Roux, F. X., A method of finite-element tearing and interconnecting and its parallel solution algorithm, *Int. J. Numer. Meth. Engrg.*, **40**, 1205-1227, 1991.
- [369] Felippa, C. A. and Park, K. C., Computational aspects of time integration procedures in structural dynamics – I. Implementation, *J. Appl. Mech.*, **45**, 595-602, 1978.
- [370] Felippa, C. A., Parametrized variational principles encompassing compressible and incompressible elasticity, *Int. J. Solids Struc.*, **29**, 57-68, 1991.
- [371] Felippa, C. A. and Park, K. C., The construction of free-free flexibility matrices for multilevel structural analysis, *Comp. Meths. Appl. Mech. Engrg.*, **191**, 2111-2140, 2002.
- [372] Felippa, C. A., and Oñate, E., Nodally exact Ritz discretizations of 1D diffusion-absorption and Hemholtz equations by variational FIC and modified equation methods. *Comput. Mech.*, **39**, 91-112, 2007.
- [373] Felippa, C. A., Oñate, E., and Idelsohn, S. R., , FIC-based fluid-solid variational formulation encompassing incompressibility: I. Static 1D analysis, submitted to *Comp. Meths. Appl. Mech. Engrg.*, 2011.
- [374] Felippa, C. A., Oñate, E., and Idelsohn, S. R., , FIC-based fluid-solid variational formulation encompassing incompressibility: III. Time-domain dynamic 1D analysis, in preparation.
- [375] Fraeijs de Veubeke, B. M., *Matrix structural analysis: Lecture Notes for the International Research Seminar on the Theory and Application of Finite Element Methods*, Calgary, Alberta, Canada, July-August 1973; reprinted in *B. M. Fraeijs de Veubeke Memorial Volume of Selected Papers*, ed. by M. Geradin, Sitthoff & Noordhoff, Alphen aan den Rijn, The Netherlands, 509-568, 1980.
- [376] Franca, L. P., Analysis and finite element approximation of compressible and incompressible linear isotropic elasticity based upon a variational principle, *Comp. Meths. Appl. Mech. Engrg.*, **76**, 259-273, 1989.
- [377] González, L. A., Park, K. C. and Felippa, C. A., Partitioned formulation of frictional contact problems using localized Lagrange multipliers, *Commun. Numer. Meth. Engrg.*, **22**, 319-333, 2006.
- [378] Herrmann, L. R., Elasticity equations for incompressible and nearly incompressible materials by a variational theorem, *AIAA J.*, **13**, 1896-1900, 1965.
- [379] Hu, H. *Variational Principles of Theory of Elasticity with Applications*, Gordon and Breach Science Publishers Inc, New York, 1984; available online as Google eBook.
- [380] Idelsohn, S. R., Oñate, E., and Del Pin, F., The Particle Finite Element Method: A powerful tool to solve incompressible flows with free surfaces and breaking waves, *Int. J. Numer. Meth. Engrg.*, **61**, 964-989, 2004.
- [381] Idelsohn, S. R., Del Pin, F., Rossi, R., and Oñate, E., Fluid-structure interaction problems with strong added-mass effect, *Int. J. Numer. Meth. Engrg.*, **10**, 1261-1294, 2009.

- [382] Jensen, P. S., Transient analysis of structures by stiffly stable methods, *Computers & Structures*, **4**, 615–626, 1974.
- [383] Kaneko, I., Lawo, M. and Thierauf, G., On computational procedures for the force method, *Int. J. Numer. Meth. Engrg.*, **18**, 1469–1495, 1982.
- [384] Kaneko, I. and Plemmons, R. J., Minimum norm solutions to linear elastic analysis problems, *Int. J. Numer. Meth. Engrg.*, **20**, 983–998, 1984.
- [385] Kuztesov, E. N., *Unconstrained Structure Systems*, Springer-Verlag, New York, 1991.
- [386] Lagrange, J. L., *Méchanique Analytique*, Paris, 1788. Reprinted by J. Gabay, Paris, 1989; downloadable as Google eBook.
- [387] Nadukandi, P., Stabilized finite element methods for convection-diffusion-reaction, Helmholtz and Navier-Stokes problems, Thesis, Universidad Politécnic de Catalunya, 2011.
- [388] Newton, I., *Philosophiae Naturalis Principia Mathematica*, (*Mathematical Principles of Natural Philosophy*, also known as the *Principia*), 1st.ed., London, 1687; 2nd.ed., Cambridge, 1712; 3rd.ed.,(London) 1726, final ed. (prepared by Newton, in English translation by A. Motte), London, 1729.
- [389] Okuma, M. and Shi, Q., Identification of the principal rigid body modes under free-free boundary condition, *Trans. ASME Journal of Vibration and Acoustics*, **119**(3), 341–345, 1997.
- [390] Oñate, E., Derivation of the stabilization equations for advective-diffusive fluid transport and fluid flow problems. *Comp. Meths. Appl. Mech. Engrg.*, **151**, 233–267, 1998.
- [391] Oñate, E., Possibilities of finite calculus in computational mechanics, *Int. J. Numer. Meth. Engrg.*, **60**, 255–281, 2004.
- [392] Oñate, E., Taylor, R. L., O. C. Zienkiewicz and J. Rojek, A residual correction method based on finite calculus, *Engrg. Comput.*, **20**, 629–638, 2003.
- [393] Oñate, E., Rojek, J., Taylor, R. L., and Zienkiewicz, O. C., Finite calculus formulation for incompressible solids using linear triangles and tetrahedra, *Int. J. Numer. Meth. Engrg.*, **59**, 1473–1500, 2004.
- [394] Oñate, E., Miquel, J., and Hauke, G., A stabilized finite element method for the one-dimensional advection diffusion-absorption equation using finite calculus, *Comp. Meths. Appl. Mech. Engrg.*, **195**, 3926–3946, 2006.
- [395] Oñate, E., Idelsohn, S. R., , and Felippa, C. A., Simple and accurate pressure Laplacian stabilization for incompressible continua via higher order Finite Calculus, submitted to *Int. J. Numer. Meth. Engrg.*, 2010.
- [396] Oñate, E., Nadukandi, P., Idelsohn, S. R., and Felippa, C. A., A family of residual-based stabilized finite element methods for Stokes flow, *Int. J. Numer. Meth. Engrg.*, **65**, 106–134, 2011.
- [397] Park, K. C., and Felippa, C. A., Computational aspects of time integration procedures in structural dynamics – II. Error Propagation, *J. Appl. Mech.*, **45**, 603–611, 1978.
- [398] Park, K. C. and Felippa, C. A., Partitioned analysis of coupled systems, in: Chapter 3 of *Computational Methods for Transient Analysis*, ed. by T. Belytschko and T. J. R. Hughes, North-Holland, Amsterdam, pp. 157–219, 1983.
- [399] Park, K. C., Justino, M. R, Jr. and Felippa, C. A., An algebraically partitioned FETI method for parallel structural analysis: algorithm description, *Int. J. Numer. Meth. Engrg.*, **40**, 2717–2737, 1997.

- [400] Park, K. C. and Felippa, C. A., A variational framework for solution method developments in structural mechanics, *J. Appl. Mech.*, **65**, 242–249, 1998.
- [401] Park, K. C., Gumaste, U. and Felippa, C. A., A localized version of the method of Lagrange multipliers and its applications, *Comput. Mech.*, **24**, 476–490, 2000.
- [402] Park, K. C., Felippa, C. A. and Ohayon, R., Partitioned formulation of internal fluid-structure interaction problems via localized Lagrange multipliers, *Comp. Meths. Appl. Mech. Engrg.*, **190**(24-25), 2989-3007, 2001.
- [403] Park, K. C., Felippa, C. A. and Ohayon, R., Localized formulation of multibody systems, in: *Computational Aspects of Nonlinear Systems with Large Rigid Body Motion*, ed. by J. Ambrosio and M. Kleiber, NATO Science Series, IOS Press, 253–274, 2001.
- [404] Park, K. C. and Felippa, C. A., A variational principle for the formulation of partitioned structural systems, *Int. J. Numer. Meth. Engrg.*, **47**, 395-418, 2002.
- [405] Park, K. C., Felippa, C. A., and Ohayon, R., The principal D'Alembert-Lagrange equations and applications to flexible floating systems, *Int. J. Numer. Meth. Engrg.*, **77**, 1072–1099, 2009.
- [406] Patnaik, S. N., An integrated force method for discrete analysis, *Int. J. Numer. Meth. Engrg.*, **6**, 237–251, 1973.
- [407] Patnaik, S. N., The variational energy formulation for the integrated force method, *AIAA J.*, **24**, 129–136, 1986.
- [408] Prager, W., Variational principles for linear elastostatics for discontinuous displacements, strains and stresses, in *Recent Progress in Applied Mechanics*, The Folke-Odgvist Volume, ed. by B. Broger, J. Hult and F. Niordson, Almqvist and Wiksell, Stockholm, 463–474, 1967.
- [409] Ross, M. R., *Coupling and Simulation of Acoustic Fluid-Structure Interaction Systems Using Localized Lagrange Multipliers*, Ph.D. Thesis, Department of Aerospace Engineering Science, University of Colorado, Boulder, 2006.
- [410] Shabana, A. A., *Dynamics of Multibody Systems*, Cambridge University Press, Cambridge, 1998.
- [411] Synge, J. L., Classical dynamics, in S. Flügge (ed.), *Handbuch der Physik*, vol. III/1, Springer-Verlag, Berlin, 1–225, 1960.
- [412] Taylor, R. L., Pister, K. S., and Herrmann, L. R., A variational principle for incompressible and nearly incompressible orthotropic elasticity, *Int. J. Solids Struc.*, **4**, 875–883, 1968.
- [413] Thomson, W. and Tait, P. G., *Treatise on Natural Philosophy*, Part I, Cambridge University Press, Cambridge, 1867.
- [414] Tong, P., New displacement finite element method for solid continua, *Int. J. Numer. Meth. Engrg.*, **2**, 73–83, 1970.
- [415] Verchery, G., Régularisation du système de l'équilibre des structures élastiques discretès, *Comptes Rendus à l'Académie des Sciences*, Paris, t. 311, Série II, 585–589, 1990.