

# Bibliografia

- [1] B. K. Alpert, *Wavelets and Other Bases for Fast Numerical Linear Algebra*, Wavelets - A Tutorial in Theory and Applications, C. K. Chui (editor), pp. 181-216, Academic Press, (1992);
- [2] F. L. Alvarado, *Manipulation and Visualization of Sparse Matrices*, ORSA Journal on Computing, Vol. 2, nº 2, pp. 186-207, (1990);
- [3] K. Amaratunga, J. Williams e S. Yokoyama, *Wavelet Based Hierarchical Solutions of Partial Differential Equations*, Proc. Complas III - International Conference on Computational Plasticity, Fundamentals and Applications, pp. 311-323, Barcelona, (1992);
- [4] K. Amaratunga e J. R. Williams, *Wavelet Based Green's Function Approach to 2D PDEs*, Engineering Computations, vol. 10, pp. 349-367, (1993);
- [5] K. Amaratunga, J. R. Williams, S. Qian e J. Weiss, *Wavelet-Galerkin Solutions for One-Dimensional Partial Differential Equations*, International Journal for Numerical Methods in Engineering, vol. 37, pp. 2703-2716, (1994);
- [6] E. R. Arantes e Oliveira, *Theoretical Foundations of the Finite Element Method*, International Journal of Solids and Structures, Vol. 4, pp. 929-952, (1968);
- [7] E. R. Arantes e Oliveira, *Resistência dos Materiais - Livro 2: Elementos da Teoria da Elasticidade*, AEIST, Lisboa, (1969);
- [8] H. Armen, A. B. Pifko, H. S. Levine e G. Isakson, *Plasticity, em Finite Element Techniques in Structural Mechanics*, H. Tottenham e C. Brebbia (editores), Southampton University Press, (1970);
- [9] P. Auscher, *Wavelets with Boundary Conditions on the Interval*, Wavelets - A Tutorial in Theory and Applications, C. K. Chui (editor), pp. 217-236, Academic Press, (1992);
- [10] I. Babuška e A. K. Aziz, *Survey Lectures in the Mathematical Foundations of the FEM*, in *The Mathematical Foundations of the FEM with Applications to PDE*, editor A. K. Aziz, Academic Press, Londres, (1972);

- [11] I. Babuška, J. T. Oden e J. K. Lee, *Mixed-Hybrid Finite Element Approximations of Second-Order Elliptic Boundary Value Problems*, Computer Methods in Applied Mechanics and Engineering, vol. 11, pp. 175-206, (1977);
- [12] I. Babuška, J. T. Oden e J. K. Lee, *Mixed-Hybrid Finite Element Approximations of Second-Order Elliptic Boundary Value Problems - Part2 Weak Hybrid Methods*, Computer Methods in Applied Mechanics and Engineering, vol. 14, pp. 1-22, (1978);
- [13] R. Baldacci, G. Ceradini e E. Giangreco, *Plasticità*, Collana Tecnico Scientifica per la Progettazione di Strutture in Acciaio, CISIA, Milão, (1974);
- [14] J. R. Barber, *Elasticity*, Solid Mechanics and Its Applications, Kluwer Academic Publishers, Dordrecht, (1992);
- [15] K. J. Bathe e E. L. Wilson, *Numerical Methods in Finite Element Analysis*, Prentice-Hall, New Jersey, (1976);
- [16] K. J. Bathe e E. N. Dvorkin, *A Four-Node Plate Bending Element Based on Mindlin/Reissner Plate Theory and Mixed Interpolation*, International Journal for Numerical Methods in Engineering, Vol. 21, pp. 367-383, (1985);
- [17] J. L. Batoz e G. Dhatt, *Modélisation des Structures par Éléments Finis, Volume 2 - Poutres et Plaques*, Hermes, Paris, (1990);
- [18] K. G. Beauchamp, *Applications of Walsh and Related Functions - With an introduction to Sequency Theory*, Academic Press, Londres, (1984);
- [19] T. Belytschko e M. Velebit, *Finite Element Method for Elastic Plastic Plates*, Journal Engng. Mech. Division, ASCE, pp. 227-241, (1972);
- [20] S. Bertoluzza, G. Naldi, J. C. Ravel, *Wavelet Methods for the Numerical Solution of Boundary Value Problems on the Interval*, Wavelets: Theory, Algorithms and Applications, C. K. Chui, L. Montefusco e L. Puccio (editores), pp. 425-448, Academic Press, (1994);
- [21] S. Bertoluzza, Y. Maday e J. C. Ravel, *A Dynamically Adaptive Wavelet Method for Solving Partial Differential Equations*, Computer Methods in Applied Mechanics and Engineering, 116, pp. 293-299, (1994);
- [22] G. Beylkin, R. Coifman e V. Rokhlin, *Fast Wavelet Transforms and Numerical Algorithms I*, Communications on Pure and Applied Mathematics, vol. 44, pp. 141-183, (1991);
- [23] D. Bigi e P. Cicala, *Weighted Residuals as a Basis of a General Solution Method in Elasticity*, Meccanica, 19, pp. 34-37, (1984);
- [24] F. Brezzi e M. Fortin, *Mixed and Hybrid Finite Element Methods*, Springer Series in Computational Mathematics, Springer-Verlag, New-York, (1991);

- [25] J. Buescu, *Ondeletas, Árvores e Florestas*, INGENIUM, Série II, N<sup>o</sup> 7, pp. 78-79, (1996);
- [26] J. R. Bunch e B. N. Parlett, *Direct Methods for Solving Symmetric Indefinite Systems of Linear Equations*, SIAM Journal on Numerical Analysis, Vol. 8, n<sup>o</sup> 4, pp. 639-655, (1971);
- [27] M. Capurso, *A General Method for the Incremental Solution of Elastic-Plastic Problems*, Meccanica, Vol. 4, pp. 267-280, (1969);
- [28] M. Capurso e G. Maier, *Incremental Elastoplastic Analysis and Quadratic Optimization*, Meccanica, Vol. 5, pp. 107-116, (1970);
- [29] J. W. Carl, R. V. Swartwood, *A Hybrid Walsh Transform Computer*, IEEE Trans. Comput., C-22, pp. 669-672, (1973);
- [30] L. M. S. S. Castro, *Interpolação de Walsh em Problemas de Elasticidade Plana*, Dissertação de Mestrado, Universidade Técnica de Lisboa, (1992);
- [31] L. M. S. S. Castro e J. A. T. Freitas, *Walsh Function Processing in the Context of Elastostatics*, EPMESCIV, pp. 1266-1273, Dalian, (1992);
- [32] L. M. S. S. Castro e J. A. T. Freitas, *On the Implementation of a Mixed Finite Element Formulation Based on Digital Interpolation*, Civil-Comp93, Fifth International Conference on Civil and Structural Engineering Computing, pp. 71-79, Edimburgo, (1993);
- [33] L. M. S. S. Castro e J. A. T. Freitas, *Wavelets in Mixed-Hybrid Finite Element Formulations*, Education, Practice and Promotion of Computational Methods Using Small Computers, pp. 1023-1028, Macau, (1995);
- [34] Y. K. Cheung e C. Wanji, *Hybrid Quadrilateral Element Based on Mindlin/Reissner Plate Theory*, Computers & Structures, Vol. 32, n<sup>o</sup> 2, pp. 327-339, (1989);
- [35] T. M. Chien, *On Representations of Walsh Functions*, IEEE Trans. Electromag. Compat., EMC-17, n<sup>o</sup> 3, pp. 170-177, (1975);
- [36] E. Christiansen e S. Larsen, *Computations in Limit Analysis for Plastic Plates*, International Journal for Numerical Methods in Engineering, Vol. 19, pp. 169-184, (1983);
- [37] C. K. Chui, *An Introduction to Wavelets*, Academic Press, Londres, (1992);
- [38] A. Cohen, I. Daubechies e P. Vial, *Wavelets on the Interval and Fast Wavelet Transforms*, Applied and Computational Harmonic Analysis, Vol. 1, pp. 54-81, (1993);
- [39] M. Cohn, *Walsh Functions, Sequency, and Gray Codes*, SIAM J. Appl. Math., Vol. 21, pp. 442-447, (1971);

- [40] C. Comi, G. Maier e U. Perego, *Generalized Variable Finite Element Modeling and Extremum Theorems in Stepwise Holonomic Elastoplasticity with Internal Variables*, Computer Methods in Applied Mechanics and Engineering, 96, pp. 213-237, (1992);
- [41] L. Corradi, *On Compatible Finite Element Models for Elastic Plastic Analysis*, Meccanica, Vol. 13, pp. 133-150, (1978);
- [42] L. Corradi e G. Maier, *Finite Element Elastoplastic and Limit Analysis: Some Consistency Criteria and Their Implications*, Nonlinear Finite Element Analysis in Structural Mechanics, Proc. Europe-Us Workshop, Universidade de Ruhr, (1980);
- [43] L. Corradi, *A Displacement Formulation for the Finite Element Elastic-Plastic Problem*, Meccanica, Vol. 18, pp. 77-91, (1983);
- [44] L. Corradi, *On Stress Computation in Displacement Finite Element Models*, Computer Methods in Applied Mechanics and Engineering, n° 54, pp. 325-339, (1986);
- [45] L. Corradi e A. Tralli, *Formulazioni Variazionali e Modelli Agli Elementi Finiti in Presenza di Distorsioni*, Meccanica dei Materiali e delle Strutture, Atti del Convegno Nazionale in ricordo di Riccardo Baldacci e Michele Capurso, Roma, (1989);
- [46] L. Corradi, *Meccanica delle Strutture - Il Comportamento dei Mezzi Continui*, Serie di Ingegneria Civile, Volume 1, McGraw-Hill, Milão, (1992);
- [47] COSMOS/M, *Finite Element System*, Versão 1.70, Structural Research and Analysis Corporation, (1993);
- [48] M. A. Crisfield, *Non-Linear Finite Element Analysis of Solids and Structures, Volume 1: Essentials*, John Wiley & Sons, Chichester, (1991);
- [49] M. N. Dang Hung, *Sur la Plasticité et le Calcul des États Limites par Éléments Finis*, Thèse de doctorat spécial, Collection des publications n° 98, Université de Liège - Faculté des Sciences Appliquées, (1985);
- [50] G. David, *Wavelets and Singular Integrals on Curves and Surfaces*, Springer-Verlag, 2ª edição, Berlim, (1992);
- [51] A. C. Davies, *On the Definition and Generation of Walsh Functions*, IEEE Trans. Comput., C-21, pp. 187-189, (1972);
- [52] I. Daubechies, *Orthonormal Bases of Compactly Supported Wavelets*, Communications on Pure and Applied Mathematics, vol. 41, pp. 909-996, (1988);
- [53] I. Daubechies, *Orthonormal Bases of Compactly Supported Wavelets - II. Variations on a Theme*, SIAM J. Math. Anal., vol. 24, n° 2, pp. 499-519, (1993);

- [54] I. Daubechies, *Orthonormal Bases of Compactly Supported Wavelets - III. Better Frequency Resolution*, SIAM J. Math. Anal., vol. 24, n° 2, pp. 520-527, (1993);
- [55] D. Delesalle, L. Desbat e D. Trystram, *Résolution de Grandes Systèmes Linéaires Creux par Méthodes Itératives Parallèles*, Mathematical Modelling and Numerical Analysis, Vol. 27, n° 6, pp. 651-671, (1993);
- [56] Y. F. Dong e J. A. T. Freitas, *Alternative Approach for Hybrid Stress Elements with Incompatible Displacements*, pp. 99-105, CIVILCOMP, Edimburgo, (1993);
- [57] I. S. Duff, *A Survey of Sparse Matrix Research*, Proceedings of the IEEE, Vol. 65, n° 4, pp. 500-535, (1977);
- [58] I. S. Duff e J. K. Reid, *The Multifrontal Solution of Indefinite Sparse Symmetric Linear Systems*, ACM Trans. Math. Softw, 9, pp. 302-325, (1983);
- [59] I. S. Duff, A. M. Erisman e J. K. Reid, *Direct Methods for Sparse Matrices*, Monographs on Numerical Analysis, Oxford Science Publications, Oxford, (1986);
- [60] I. Farasyn e J. Maeck, *Hybrid Elements Applied to Structural Mechanics*, Tese de Licenciatura, Universidade Técnica de Lovaina, (1995);
- [61] A. M. A. Fonseca, *Plastic Analysis and Synthesis of Plates and Shells by Linear Programming*, PhD Thesis, Universidade de Londres, (1980);
- [62] J. A. T. Freitas, *The Elastoplastic Analysis of Planar Frames for Large Displacements by Mathematical Programming*, PhD Thesis, Universidade de Londres, (1979);
- [63] J. A. T. Freitas e J. P. B. Moitinho de Almeida, *A Nonlinear Projection Method for Constrained Optimization*, Civil Engineering Systems, Vol. 1, pp. 294-300, (1984);
- [64] J. A. T. Freitas e D. L. Smith, *Plastic Straining, Unstressing and Branching in Large Displacement Perturbation Analysis*, International Journal for Numerical Methods in Engineering, Vol. 20, pp. 2077-2092, (1984);
- [65] J. A. T. Freitas e D. L. Smith, *Existence, Uniqueness and Stability of Elastoplastic Solutions in the Presence of Large Displacements*, SM Arch., 9, pp. 433-450, (1984);
- [66] J. A. T. Freitas e E. M. B. R. Pereira, *O Método dos Integrais de Fronteira Usando Séries de Fourier*, MECOM89, X Congresso Ibero-Latino-Americano sobre Métodos Computacionais em Engenharia, Vol. 1, A221-A230, Porto, (1989);

- [67] J. A. T. Freitas e L. M. S. S. Castro, *O Método dos Integrais de Fronteira Usando Séries de Walsh*, MECOM89, X Congresso Ibero-Latino-Americano sobre Métodos Computacionais em Engenharia, Vol. 1, A231-A243, Porto, (1989);
- [68] J. A. T. Freitas, *Duality and Symmetry in Mixed Integral Methods of Elastostatics*, International Journal for Numerical Methods in Engineering, Vol. 28, pp. 1161-1179, (1989);
- [69] J. A. T. Freitas, *Variational Theorems in Elastoplastic Boundary Element Analysis*, BEM XI, Advances in Boundary Elements, vol. 3, pp. 65-79, Boston, (1989);
- [70] J. A. T. Freitas, *Mixed and Hybrid Symmetric Formulations for the Boundary Element Method*, European Journal of Mechanics A/Solids, vol. 9, n<sup>o</sup> 1, pp. 1-20, (1990);
- [71] J. A. T. Freitas, *Structural Analysis for Nonlinear Material Behaviour*, em Mathematical Programming Methods in Structural Plasticity, editado por D. L. Smith, CISM Courses and Lectures N<sup>o</sup> 299, pp. 373-386, Springer-Verlag, Viena, (1990);
- [72] J. A. T. Freitas e E. M. B. R. Pereira, *Application of the Mathieu Series to the Boundary Integral Method*, Computers & Structures, Vol. 40, n<sup>o</sup> 5, pp. 1307-1314, (1991);
- [73] J. A. T. Freitas, *A Kinematic Model for Plastic Limit Analysis of Solids by the Boundary Integral Method*, Computer Methods in Applied Mechanics and Engineering, 88, pp. 189-205, (1991);
- [74] J. A. T. Freitas e L. M. S. S. Castro, *Digital Interpolation in Mixed Finite Element Structural Analysis*, Computers & Structures, Vol. 44, n<sup>o</sup> 4, pp. 743-751, (1992);
- [75] J. A. T. Freitas, J. P. B. Moitinho de Almeida e E. M. B. R. Pereira, *Alternative Hybrid Formulations for the Finite Element Method*, Proc. 7th World Congress Finite Element Method, pp. 264-271, Mônaco, (1993);
- [76] J. A. T. Freitas e L. M. S. S. Castro, *Walsh Interpolation in Mixed Finite Element Elastoplastic Analysis*, Computer Methods in Mechanics, XI Polish Conference, Vol. 1, pp. 261-272, Kielce-Cedzyna, (1993);
- [77] J. A. T. Freitas, J. P. B. Moitinho de Almeida e E. M. B. R. Pereira, *Non-Conventional Hybrid/Mixed Formulations for the Finite Element Method*, Education, Practice and Promotion of Computational Methods Using Small Computers, pp. 121-133, Macau, (1995);

- [78] J. A. T. Freitas e L. M. S. S. Castro, *Mixed Finite Element Elastoplastic Analysis Based on Walsh and Wavelet Interpolation*, Computational Plasticity - Fundamentals and Applications, COMPLAS IV, pp. 2081-2092, Barcelona, (1995);
- [79] J. A. T. Freitas e J. Zhen-Yi, *Hybrid-Trefftz Finite Element Formulation for Simulation of Singular Stress Fields*, International Journal for Numerical Methods in Engineering, Vol. 39, pp. 281-308, (1996);
- [80] J. A. T. Freitas e J. Zhen-Yi, *Hybrid-Trefftz Equilibrium Model for Crack Problems*, International Journal for Numerical Methods in Engineering, Vol. 39, pp. 569-584, (1996);
- [81] J. A. T. Freitas e J. Zhen-Yi, *Hybrid-Trefftz Stress Elements for Plate Bending Analysis*, International Journal for Numerical Methods in Engineering, em publicação, (1996);
- [82] J. A. T. Freitas e C. Cismasiu, *Formulation of Hybrid-Trefftz Displacements*, Computers & Structures, submetido para publicação, (1995);
- [83] J. A. T. Freitas e C. Cismasiu, *Hybrid-Trefftz Displacement Formulation for Elastodynamic Spectral Analysis*, International Journal for Numerical Methods in Engineering, submetido para publicação, (1995);
- [84] J. Froment e S. Mallat, *Second Generation Compact Image Coding with Wavelets*, Wavelets - A Tutorial in Theory and Applications, C. K. Chui (editor), pp. 655-678, Academic Press, (1992);
- [85] Y. C. Fung, *Foundations of Solid Mechanics*, Prentice-Hall, New Jersey, (1965);
- [86] A. Geist, A. Beguelin, J. Dongarra, W. Jiang, R. Manchek, V. Sunderam, *PVM: Parallel Virtual Machine - A User's Guide and Tutorial for Networked Parallel Computing*, MIT Press, Cambridge, (1994);
- [87] A. George e J. W-H Liu, *Computer Solution of Large Sparse Positive Definite Systems*, Prentice-Hall, Englewood Cliffs, (1981);
- [88] P. L. George, *Automatic Mesh Generation: Applications to Finite Element Mesh*, John Wiley & Sons, Chichester, (1991);
- [89] R. Glowinski, W. M. Lawton, M. Ravachol e E. Tenenbaum, *Wavelet Solution of Linear and Nonlinear Elliptic, Parabolic and Hyperbolic Problems in One Space Dimension*, 10th International Conference on Numerical Methods in Applied Sciences and Engineering, Filadélfia, (1990);
- [90] I. J. Good, *The Interactive Algorithm and Practical Fourier Analysis*, J. Roy. Stat. Soc. (London), B20, pp. 361-372, (1958);

- [91] A. E. Green e W. Zerna, *Theoretical Elasticity*, 2<sup>a</sup> edição, Dover, New York, (1992);
- [92] A. Grossmann e J. Morlet, *Decomposition of Hardy Functions into Square Integrable Wavelets of Constant Shape*, SIAM J. Mat. Anal., Vol. 15, n<sup>o</sup> 4, pp. 723-736, (1984);
- [93] F. G. Gustavson, *Some Basic Techniques for Solving Sparse Systems of Linear Equations*, in *Sparse Matrices and their Applications*, pp. 41-52, editores D. J. Rose e R. A. Willoughby, IBM T. J. Watson Center, Yorktown Heights, Nova Iorque, (1971);
- [94] A. Haar, *Zür Theorie der Orthogonalen Funktionensysteme*, Math Annal, 69, pp. 331-371, (1910);
- [95] H. F. Harmuth, *Transmission of Information by Orthogonal Functions*, 2<sup>a</sup> edição, Springer-Verlag, Berlin, (1972);
- [96] *Harwell Subroutine Library*, Advanced Computing Department, Harwell Laboratory, Oxfordshire, (1990);
- [97] K. W. Henderson, *Comment on 'Computation on Fast Walsh-Fourier Transform'*, IEEE Trans. Comput, C-19, pp. 850-851, (1970);
- [98] M. R. Hestenes e E. Stiefel, *Methods of Conjugate Gradients for Solving Linear Systems*, J. Res. Nat. Bur. Stand., 49, pp. 409-436, (1952);
- [99] E. J. Hinch, *Perturbation Methods*, Cambridge Texts in Applied Mathematics, Cambridge University Press, Cambridge, (1992);
- [100] E. Hinton e H. C. Huang, *A Family of Quadrilateral Mindlin Plate Elements with Substitute Shear Strain Fields*, Computers & Structures, Vol. 23, n<sup>o</sup> 3, pp. 409-431, (1986);
- [101] P. G. Hodge e T. Belytschko, *Numerical Methods for the Limit Analysis of Plates*, Journal of Applied Mechanics, ASME, 35, pp. 796-802, (1968);
- [102] S. Jaffard e P. Laurençot, *Orthonormal Wavelets, Analysis of Operators, and Applications to Numerical Analysis*, Wavelets - A Tutorial in Theory and Applications, C. K. Chui (editor), pp. 543-601, Academic Press, (1992);
- [103] A. Jennings e J. J. McKeown, *Matrix Computation*, 2<sup>a</sup> edição, John Wiley & Sons, Chichester, (1992);
- [104] J. Jiroušek e N. Leon, *A Powerful Finite Element for Plate Bending*, Computer Methods in Applied Mechanics and Engineering, 12, pp. 77-96, (1977);
- [105] J. Jiroušek, *Basis for Development of Large Finite Elements Locally Satisfying all Field Equations*, Computer Methods in Applied Mechanics and Engineering, 14, pp. 65-92, (1978);



- [106] J. Jiroušek e L. Guex, *The Hybrid-Trefftz Finite Element Model and its Application to Plate Bending*, International Journal for Numerical Methods in Engineering, vol. 23, pp. 651-693, (1986);
- [107] J. Jiroušek, *Hybrid-Trefftz Plate Bending Elements with p-Method Capabilities*, International Journal for Numerical Methods in Engineering, vol. 24, pp. 1367-1393, (1987);
- [108] J. Jiroušek, *T-Elements: An Approach Uniting the Advantages of Finite Element and Boundary Element Methods*, XI Polish Conference on Computer Methods in Mechanics, pp. 21-40, Kielce-Cedzyna, (1993);
- [109] L. M. Kachanov, *Fundamentals of the Theory of Plasticity*, Mir Publishers, Moscovo, (1974);
- [110] R. Kao, *Approximate Solutions by Utilizing Hill Functions*, Computers & Structures, Vol. 3, pp.397-412, (1973);
- [111] W. Karush, *Minima of Functions of Several Variables with Inequalities and Side Conditions*, MS Thesis, Universidade de Chicago, (1939);
- [112] W. T. Koiter, *General Theorems for Elastic-Plastic Solids*, em Progress in Solid Mechanics 1, pp. 167-221, (1960);
- [113] H. W. Kuhn e A. W. Tucker, *Nonlinear Programming*, 2nd Berkeley Symp. Math. Statistics and Probability, Berkeley, (1951);
- [114] R. B. Lackey, D. Meltzer, *A Simplified Definition of Walsh Functions*, IEEE Trans. Comput., C-20, pp. 211-213, (1971);
- [115] C. Lanczos, *Solution of Systems of Linear Equations by Minimised Iterations*, J. Res. Nat. Bur. Standard, 49, pp. 33-53, (1952);
- [116] L. Landau e E. Lipchitz, *Théorie de L' élasticité*, Physique Théorique, Edição Mir, Moscovo, (1967);
- [117] H. Larsen, *An Algorithm to Compute the Sequency Ordered Walsh Transform*, IEEE Trans. Acoust. Sp. Sig. Proc., ASSP-24, pp. 335-336, (1976);
- [118] S. H. Lo, *Generation of Quadrilateral Meshes over Irregular Planar Domains*, Education, Practice and Promotion of Computational Methods Using Small Computers, pp. 975-980, Macau, (1995);
- [119] A. E. H. Love, *A Treatise on the Mathematical Theory of Elasticity*, 4ª edição, Dover, New-York, (1944);
- [120] J. Lubliner, *Plasticity Theory*, Macmillan Publishing Company, New York, (1990);

- [121] G. Maier, *Quadratic Programming and Theory of Elastic-Perfectly Plastic Structures*, Meccanica, Vol. 3, pp. 265-273, (1968);
- [122] G. Maier, *A Quadratic Programming Approach for Certain Classes of Non-Linear Structural Problems*, Meccanica, Vol. 3, pp. 121-130, (1968);
- [123] D. S. Malkus e T. R. J. Hughes, *Mixed Finite Element Methods - Reduced and Selective Integration Techniques: a Unification of Concepts*, Computer Methods in Applied Mechanics and Engineering, 15, pp. 63-81, (1978);
- [124] S. G. Mallat, *A Theory for Multiresolution Signal Decomposition : The Wavelet Representation*, IEEE Transactions on Pattern Analysis and Machine Intelligence, Vol. 11, n<sup>o</sup> 7, pp. 674-693, (1989);
- [125] J. Mandel, *Adaptive Iterative Solvers in Finite Elements, in Solving Large-Scale Problems in Mechanics - The Development and Application of Computational Solution Methods*, pp. 65-88, editor M. Papadrakakis, John Wiley & Sons, Chichester, (1993);
- [126] E. H. Mansfield, *The Bending & Stretching of Plates*, 2<sup>a</sup> edição, Cambridge University Press, Cambridge, (1989);
- [127] J. W. Manz, *A Sequency-Ordered Fast Walsh Transform*, IEEE Trans. Audio Electroacoust, AV-20, pp. 204-205, (1972);
- [128] H. M. Markowitz, *The Elimination Form of the Inverse and its Applications*, Management Sci, 3, pp. 255-269, (1957);
- [129] H. Matsunaga, *The Application of a Two-Dimensional Higher-Order Theory for the Analysis of a Thick Elastic Plate*, Computers & Structures, Vol. 45, n<sup>o</sup> 4, pp. 633-648, (1992);
- [130] Y. Meyer, *Ondelettes et Opérateurs*, Vol. 1, Hermann, 1<sup>a</sup> edição, Paris, (1990);
- [131] R. D. Mindlin, *Influence of Rotatory Inertia and Shear on Flexural Motions of Isotropic, Elastic Plates*, J. Appl. Mechanics, Vol. 18, n<sup>o</sup> 1, pp. 31-38, (1951);
- [132] J. P. B. Moitinho de Almeida, *Modelos de Elementos Finitos para a Análise Elastoplástica*, Tese de Doutorado, Universidade Técnica de Lisboa, (1989);
- [133] J. P. B. Moitinho de Almeida, J. A. T. Freitas, *Alternative Approach to the Formulation of Hybrid Equilibrium Finite Elements*, Computers & Structures, Vol. 40, n<sup>o</sup> 4, pp. 1043-1047, (1991);
- [134] J. P. B. Moitinho de Almeida, J. A. T. Freitas, *Continuity Conditions for Finite Element Analysis of Solids*, International Journal for Numerical Methods in Engineering, Vol. 33, pp. 845-853, (1992);

- [135] J. P. B. Moitinho de Almeida, *Janela: Uma interface gráfica destinada à aplicação em problemas de Mecânica Computacional*, Relatório Interno, Instituto Superior Técnico, Lisboa, (1992);
- [136] J. P. B. Moitinho de Almeida e J. A. T. Freitas, *Some Aspects on the Parallel Implementation of Non Conventional Finite Element Formulations*, Proc. of the 4th Int. Conf. on Computational Plasticity: Fundamentals and Applications, pp. 2027-2035, Barcelona, (1995);
- [137] J. Munro e D. L. Smith, *Linear Programming Duality in Plastic Analysis and Synthesis*, Int. Symp. on Computer-Aided Structural Design, Coventry, (1972);
- [138] B. M. Ncube, *Elastostatic Analysis of Plates and Solids Using Mixed-Hybrid Finite Elements*, Dissertação de mestrado, Heriot-Watt University/Instituto Superior Técnico, (1994);
- [139] B. Nour-Omid, *Solving Large Linearized Systems in Mechanics*, in Solving Large-Scale Problems in Mechanics - The Development and Application of Computational Solution Methods, pp. 39-64, editor M. Papadrakakis, John Wiley & Sons, Chichester, (1993);
- [140] C. Nyssen e P. Beckers, *A Unified Approach for Displacement, Equilibrium and Hybrid Finite Element Models in Elasto-Plasticity*, Computer Methods in Applied Mechanics and Engineering, 44, pp. 131-151, (1984);
- [141] M. Ortiz e E. P. Popov, *Accuracy and Stability of Integration Algorithms for Elastoplastic Constitutive Relations*, International Journal for Numerical Methods in Engineering, vol. 21, pp. 1561-1576, (1985);
- [142] D. R. J. Owen e E. Hinton, *Finite Elements in Plasticity - Theory and Practice*, Pineridge Press, Swansea, (1980);
- [143] C. C. Paige e M. A. Saunders, *Solution of Sparse Indefinite Systems of Linear Equations*, SIAM J. Num. Analysis, 12, pp. 617-629, (1975);
- [144] R. E. A. Paley, *A Remarkable Series of Orthogonal Functions*, Proc. London Math. Soc., 34, pp. 241-279, (1932);
- [145] P. Papadopoulos e R. L. Taylor, *A Triangular Element Based on Reissner-Mindlin Plate Theory*, International Journal for Numerical Methods in Engineering, Vol. 30, pp. 1029-1049, (1990);
- [146] M. Papadrakakis, *Solving Large-Scale Linear Problems in Solid and Structural Mechanics*, in Solving Large-Scale Problems in Mechanics - The Development and Application of Computational Solution Methods, pp. 1-37, editor M. Papadrakakis, John Wiley & Sons, Chichester, (1993);
- [147] E. M. B. R. Pereira, *Elementos Finitos de Tensão - Aplicação à análise elástica de estruturas*, Tese de Doutoramento, Universidade Técnica de Lisboa, (1993);

- [148] E. M. B. R. Pereira e J. A. T. Freitas, *Implementation of a Mixed-Hybrid Finite Element Model Based on Legendre Polynomials*, Education, Practice and Promotion of Computational Methods Using Small Computers, pp. 987-992, Macau, (1995);
- [149] E. M. B. R. Pereira e J. A. T. Freitas, *A Mixed-Hybrid Finite Element Model Based on Orthogonal Functions*, International Journal for Numerical Methods in Engineering, Vol. 39, pp. 1295-1312, (1996);
- [150] E. M. B. R. Pereira e J. A. T. Freitas, *A Hybrid-Mixed Finite Element Model Based on Legendre Polynomials for Reissner-Mindlin Plates*, Computer Methods in Applied Mechanics and Engineering, aceite para publicação, (1996);
- [151] O. J. B. A. Pereira, *Um Modelo de Elementos Finitos de Equilíbrio para Elasticidade Tridimensional*, Dissertação de Mestrado, Universidade Técnica de Lisboa, (1993);
- [152] O. J. B. A. Pereira, *Automatic Drawing of Stress Trajectories in Plane Systems*, Technical Note, Computers & Structures, Vol. 53, n° 2, pp. 473-476, (1993);
- [153] O. J. B. A. Pereira e J. P. B. Moitinho de Almeida, *Equilibrium Finite Elements and Dual Analysis in Three-Dimensional Elastostatics*, Education, Practice and Promotion of Computational Methods Using Small Computers, pp. 955-960, Macau, (1995);
- [154] T. H. H. Pian, *Derivation of Element Stiffness Matrices by Assumed Stress Distributions*, AIAA Journal, 2, pp. 1333-1336, (1964);
- [155] T. H. H. Pian e P. Tong, *Basis of Finite Element Methods for Solid Continua*, International Journal for Numerical Methods in Engineering, vol. 1, pp. 3-28, (1969);
- [156] T. H. H. Pian, *Finite Element Formulation by Variational Principles with Relaxed Continuity Requirements*, em *The Mathematical Foundations of the FEM with Applications to PDE*, editado por A. K. Aziz, Academic Press, Londres, (1972);
- [157] T. H. H. Pian, *A Historical Note About 'Hybrid Elements'*, International Journal for Numerical Methods in Engineering, vol. 12, pp. 891-892, (1978);
- [158] T. H. H. Pian e D. P. Chen, *Alternative Ways for Formulation of Hybrid Stress Elements*, International Journal for Numerical Methods in Engineering, vol. 18, pp. 1679-1684, (1982);
- [159] T. H. H. Pian, D. P. Chen e D. Kang, *A New Formulation of Hybrid/Mixed Finite Element*, Computers & Structures, Vol. 16, n° 1-4, pp. 81-87, (1983);

- [160] T. H. H. Pian, *Reflections and Remarks on Hybrid and Mixed Finite Element Methods*, em *Hybrid and Mixed Finite Element Methods*, editado por S. N. Atluri, R. H. Gallagher e O. C. Zienkiewicz, pp. 565-570, John Wiley & Sons, (1983);
- [161] T. H. H. Pian e K. Sumihara, *Rational Approach for Assumed Stress Finite Elements*, *International Journal for Numerical Methods in Engineering*, Vol. 20, pp. 1685-1695, (1984);
- [162] T. H. H. Pian e C. C. Wu, *A Rational Approach for Choosing Stress Terms for Hybrid Finite Element Formulations*, *International Journal for Numerical Methods in Engineering*, Vol. 26, pp. 2331-2343, (1988);
- [163] T. H. H. Pian, *State-of-the-Art Development of Hybrid/Mixed Finite Element Method*, *Finite Elements in Analysis and Design*, 21, pp. 5-20, (1995);
- [164] H. Pina, *Métodos Numéricos*, McGraw-Hill, Alfragide, (1995);
- [165] S. Pissanetzky, *Sparse Matrix Technology*, Academic Press, Londres, (1984);
- [166] M. Piteri, *Hierarchical 2d Mesh Generation Using a Topological Data Structure*, *Education, Practice and Promotion of Computational Methods Using Small Computers*, pp. 981-986, Macau, (1995);
- [167] C. Polizzotto, *Minimum Theorems for Displacement and Plastic Strain Rate Histories in Structural Elastoplasticity*, *Meccanica*, Vol. 10, pp. 99-106, (1975);
- [168] D. Pollen, *Daubechies' Scaling Function on  $[0, 3]$* , *Wavelets - A Tutorial in Theory and Applications*, C. K. Chui (editor), pp. 3-13, Academic Press, (1992);
- [169] W. H. Press, S. A. Teukolsky, W. T. Vetterling, B. P. Flannery, *Numerical Recipes in Fortran - The Art of Scientific Computing*, 2ª edição, Cambridge University Press, Cambridge, (1992);
- [170] S. Qian e J. Weiss, *Wavelets and the Numerical Solution of Partial Differential Equations*, *Journal on Computational Physics*, 106, pp. 155-175, (1993);
- [171] H. Rademacher, *Einige Sätze von Allgemeinen Orthogonalfunktionen*, *Math. Annal.*, 87, pp. 122-138, (1922);
- [172] A. Razzaque, *Program for Triangular Bending Elements with Derivative Smoothing*, *International Journal for Numerical Methods in Engineering*, Vol. 6, pp. 333-343, (1973);
- [173] J. S. Rebelo, *Modelos de Elementos Finitos para a Análise Elástica de Lajes*, Tese de Doutoramento, Universidade Técnica de Lisboa, (1993);
- [174] J. K. Reid, *On the Method of Conjugate Gradients for the Solution of Large Sparse Systems of Linear Equations*, pp. 231-254, em *Large Sparse Sets of Linear Equations*, editado por J. K. Reid, Academic Press, Nova Iorque, (1971);

- [175] E. Reissner, *The Effect of Transverse Shear Deformation on the Bending of Elastic Plates*, J. Appl. Mechanics, Vol. 18, n<sup>o</sup> 2, pp. A69-A77, (1945);
- [176] J. E. Roberts e J. M. Thomas, *Mixed and Hybrid Methods*, Handbook of Numerical Analysis, Vol. II, Finite Element Methods (Part 1), Editado por P. G. Ciarlet e J. L. Lions, Elsevier Science Publishers B.V., Amesterdão, (1991);
- [177] O. L. Roufaeil, *A New Four-Node Quadrilateral Plate Bending Element*, Computers & Structures, Vol. 54, n<sup>o</sup> 5, pp. 871-879, (1995);
- [178] F. Schipp, W. R. Wade, P. Simon, *Walsh Series - An introduction to dyadic harmonic analysis*, Adam Hilger, Bristol, (1990);
- [179] J. L. Shanks, *Computation of the Fast Walsh-Fourier Transform*, IEEE Trans. Comput., C-18, pp. 457-459, (1969);
- [180] D. L. Smith, *Plastic Limit Analysis and Synthesis of Structures by Linear Programming*, PhD Thesis, Universidade de Londres, (1974);
- [181] H. Stolarski e T. Belytschko, *Limitation Principles for Mixed Finite Elements Based on the Hu-Washizu Variational Formulation*, Computer Methods in Applied Mechanics and Engineering, 60, pp. 195-216, (1987);
- [182] G. Strang e G. J. Fix, *An Analysis of the Finite Element Method*, Prentice-Hall - Series in Automatic Computation, Englewood Cliffs, (1973);
- [183] G. Strang, *Wavelets and Dilation Equations: A Brief Introduction*, SIAM Review, vol. 32, n<sup>o</sup> 4, pp. 614-627, (1989);
- [184] D. A. Swick, *Walsh Function Generation*, IEEE Trans. Inform. Theory, IT-15, pp. 167, (1969);
- [185] K. Y. Sze, *Efficient Formulation of Robust Hybrid Elements Using Orthogonal Stress/Strain Interpolants and Admissible Matrix Formulation*, International Journal for Numerical Methods in Engineering, Vol. 35, pp. 1-20, (1992);
- [186] R. L. Taylor, P. J. Beresford e E. L. Wilson, *A Non-conforming Element for Stress Analysis*, International Journal for Numerical Methods in Engineering, Vol. 10, pp. 1211-1219, (1976);
- [187] S. P. Timoshenko e S. Woinowsky-Krieger, *Theory of Plates and Shells*, 2<sup>a</sup> edição, McGraw-Hill International Book Company, Tóquio, (1970);
- [188] S. P. Timoshenko e J. N. Goodier, *Theory of Elasticity*, 3<sup>a</sup> edição, McGraw-Hill International Book Company, Tóquio, (1982);
- [189] A. Vásárhelyi, *Application of the Haar Function's System in Stress Analysis*, Acta Technica Academiae Scientiarum Hungariae, Tomus 89 (3-4), pp. 407-419, (1979);

- [190] B. M. F. de Veubeke, *Displacement and Equilibrium Models in the Finite Element Method*, Solid Mechanics Archives, B.M. Fraeijs de Veubeke- Memorial Volume of Selected Papers, M Geradin (editor), Sijthoff & Noordhoff International Publishers, Alphen aan den Rijn, (1980);
- [191] B. M. F. de Veubeke, *A Course in Elasticity*, Applied Mathematical Sciences, Vol. 29, Springer-Verlag, New York, (1979);
- [192] J. L. Walsh, *A Closed Set of Normal Orthogonal Functions*, Ann. J. Math., 55, pp. 5-24, (1923);
- [193] K. Washizu, *Variational Methods in Elasticity and Plasticity*, 3ª edição, Pergamon Press, (1982);
- [194] Z. Waszczyszyn, *Computational Methods and Plasticity*, Faculty of Aerospace Engineering, Delft University of Technology, Report LR-583, (1989);
- [195] M. V. Wickerhauser, *Acoustic Signal Compression with Wavelet Packets*, Wavelets - A Tutorial in Theory and Applications, C. K. Chui (editor), pp. 679-700, Academic Press, (1992);
- [196] J. R. Williams e K. Amaratunga, *Introduction to Wavelets in Engineering*, International Journal for Numerical Methods in Engineering, vol. 37, pp. 2365-2388, (1994);
- [197] M. L. Williams, *Stress Singularities Resulting From Various Boundary Conditions in Angular Corners of Plates in Extension*, ASME J. Appl. Mechanics, Vol. 19, pp. 526-528, (1952);
- [198] S. Wolfram, *Mathematica - A System for Doing Mathematics by Computer*, Addison Wesley, 2ª edição, Redwood City, (1991);
- [199] W. M. Xue, L. A. Karlovitz e S. N. Atluri, *On the Existence and Stability Conditions for Mixed-Hybrid Finite Element Solutions Based on Reissner's Variational Principle*, International Journal of Solids and Structures, Vol. 21, N° 1, pp. 97-116, (1985);
- [200] C. K. Yuen, *Remarks on the Ordering of Walsh Functions*, IEEE Trans. Comput., C-21, pp. 1452, (1972);
- [201] C. K. Yuen, *Function Approximation by Walsh Series*, IEEE Trans. Comput, C-24, pp. 590-598, (1975);
- [202] O. C. Zienkiewicz e R. L. Taylor, *The Finite Element Method, Volume 1 - Basic Formulation and Linear Problems*, 4ª edição, McGraw-Hill Book Company, Berkshire, (1989);
- [203] O. C. Zienkiewicz e R. L. Taylor, *The Finite Element Method, Volume 2 - Solid and Fluid Mechanics, Dynamics and Non-Linearity*, 4ª edição, McGraw-Hill Book Company, Berkshire, (1991);

- [204] O. C. Zienkiewicz, Z. Xu, L. F. Zeng, A. Samuelsson e N. E. Wiberg, *Linked Interpolation for Reissner-Mindlin Plate Elements: Part 1 - A Simple Quadrilateral*, International Journal for Numerical Methods in Engineering, Vol 36, pp. 3043-3056, (1993).