反算問題

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References

[1] Amini S and Maines ND, Preconditioned Krylov subspace methods for boundary element solution of the Helmholtz equation, Int. J. Numer. Meth. Engng., Vol.41, pp.875-898, 1998.

[2] Aparicio ND and Pidcock M, The boundary inverse problem for the Laplace equation in two dimensions, Inverse Problems, Vol.12, pp.565-577, 1996.

[3] Barboteu M, Alart P and Lebon F, A modified element-by-element preconditioner for elastostatics, Journal of Applied Mechanics, Vol.65, pp.531-533, 1998.

[4] Baumeister KJ and Kreider, Preconditioning the Helmholtz equation, Journal of Sound and Vibration, Vol.209, No.1, pp.77-79, 1998.

[5] Berry MW, Drmac Z and Jessup ER, Matrices, vector spaces, and information retrieval, SIAM Review, Vol.41, No.2, pp.335-362, 1999.

[6] Cardenas-Garcia JF, The Moire circular disc: two inverse problems, Mechanics Research Communications, Vol.28, No.4, pp.381-387, 2001.

[7] Chang JR, Yeih W and Shieh MH, On the modified Tikhonov's regularization method for the Cauchy problem of the Laplace equation, Journal of Marine Science and Technology, Vol.9, No.2, pp.113-121, 2001.

[8] Chen JT and Chen KH, Analytical study and numerical experiments for Laplace equation with overspecified boundary conditions, Applied Mathematical Modelling, Vol.22, pp.703-725, 1998.

[9] Chen JT, Liang MT and Yang SS, Dual boundary integral equations for exterior problems, Engineering Analysis with Boundary Elements, Vol.16, pp.333-340, 1995.

[10] Chen LY, Chen JT, Hong H-K and Chen CH, Application of Cesaro mean and the L-curve for the deconvolution problem, Soil Dynamics and Earthquake Engineering, Vol.14, pp.361-373, 1995.

[11] Chen W, A new extrapolation algorithm for band-limited signals using the regularization method, IEEE Transactions on Signal Processing, Vol.41, No.3, pp.1048-1060, 1993.

[12] Cheng J, Hon YC, Wei T and Yamamoto, Numerical solution of a Cauchy problem for an elliptic equation, Inverse Problems in Engineering Mechanics II, International Symposium on Inverse Problems in Engineering Mechanics, Nagano, Japan, pp. 493-500, 2000.

[13] Colton D, Coyle J and Mark P, Recent developments in inverse acoustic scattering theory, SIAM Review, Vol.42, No.3, pp.369-414, 2000.

[14] Davies AJ, Dixon LCW, Roy R and Zee PVD, Regularization and the inverse problem, Advances in Engineering Software, Vol.30, pp.557-562, 1999.

[15] Davies AR and Hassan MF, Optimality in regularization of ill-posed inverse problems, in inverse problems: An interdisciplinary study, edited by Sabatier PC, Academic Press, 1987.

[16] Defrise M and Mol CD, A note on stopping rules for iterative regularization methods and filteres SVD, in inverse problems: An interdisciplinary study, edited by Sabatier PC, Academic Press, 1987.

[17] DeMey G, Integral equations for potential problems with the source function not located on the boundary, Computers and Structures, Vol.8, pp.113-115, 1978.

[18] Dippery KD, Phillips AW and Allemang RJ, Condensation of the spatial domain in modal parameter estimation, International Journal of Analytical and Experimental Modal Analysis, Vol.11, No.3 and 4, pp.216-225, 1996.

[19] Dong CW, A regularization method for the numerical inversion of the Laplace transform, SIAM J. Numer. Anal., Vol.30, No.3, pp.759-773, 1993.

[20] Gallego R and Suarez J, Solution of inverse problems by boundary integral equations without residual minimization, International Journal of Solids and Structures, Vol.37, pp.5629-5652, 2000.

[21] Farhat C and Sobh N, A coarse/fine preconditioner for very ill-conditioned finite element problems, Int. J. Numer. Meth. Engng., Vol.28, pp.1715-1723, 1989.

[22] Fung RF, Hwang CC, Huang CS and Chen WP, Inverse dynamics of a toggle mechanism, Computers and Structures, Vol.63, No.1, pp.91-99, 1997.

[23] Hansen PC, Numerical tools for analysis and solution for Fredholm integral equations of the first kind, Inverse Problem, Vol.8, pp.849-872, 1992.

[24] Hansen PC, Analysis of discrete ill-posed problems by means of the L-curve, SIAM Review, Vol.34, No.4, pp.561-580, 1992.

[25] Heise U, The spectra of some integral operators for plane elastostatical boundary value problems, Journal of Elasticity, Vol.8, pp.47-79, 1978.

[26] Hon YC and Wei T, Backus-Gilbert algorithm for the Cauchy problem of the Laplace equation, Inverse Problems, Vol.17, pp.261-271, 2001.

[27] Hopkins IL and Hamming RW, On creep and relaxation, J. App. Phy., Vol.28, No.8, pp.906-909, 1957.

[28] Hsiao G and Maccamy RC, Solution of boundary value problems by integral equations of the first kind, SIAM Review, Vol.15, No.4, pp.687-705, 1973.

[29] Huang CH and Chen CW, A boundary element-based inverse problem in estimating transient boundary conditions with conjugate method, Int. J. Numer. Meth. Engng., Vol.42, pp.943-965, 1998.

[30] Huang CH and Shih WY, An inverse problem in estimating interfacial cracks in bimaterials by boundary element technique, Int. J. Numer. Meth. Engng., Vol.45, pp.1547-1567, 1999.

[31] Ingham DB and Yuan Y, The boundary element method for solving improperly posed problems,Topics in Engineering, Vol.9, WITpress, 1994.

[32] Ingham DB and Wrobel LC, Boundary integral formulations for inverse analysis, Advances in Boundary Elements, Vol.1, WITpress, 1997.

[33] Jones JG, On the numerical solution of convolution integral equations and system of such equations, Math. Comp., Vol.15, pp.131-142, 1961

[34] Kilmer ME, Cauchy-like preconditioners for two-dimensional ill-posed problems, SIAM J. Matrix Anal. Appl., Vol.20, No.3, pp.777-799, 1999.

[35] Kishimoto K, Inoue H and Shibuya T, Determination of stress components from thermoelastic data by boundary element inverse analysis, Boundary Element Methods, pp.245-254, 1996.

[36] Kobayashi K, Onishi K and Ohura Y, On identifying Dirichlet condition for 2D Laplace equation by BEM, Engineering Analysis with Boundary Elements, Vol.17, pp.223-230, 1996.

[37] Krylov AS and Laykishev AV, A modification of the projection method for integral equation of the first kind, Computational Mathematics and Modeling, Vol.12, No.3, pp.271-278, 2001.

[38] Lavrent'ev MM, Romanov VG and Shishat-skii SP, Ill-posed problems of mathematical physics and analysis, Translations of Mathematical Monographs, Vol.64, 1980.

[39] Lesnic D, Elliott L and Ingham DB, An iterative boundary element method for solving numerically the Cauchy problem for the Laplace equation, Engineering Analysis with Boundary Elements, Vol.20, No.2, pp.123-133, 1997.

[40] Lesnic D, Ellott L and Ingham DB, The boundary element solution of the Laplace and biharmonic equations subjected to noisy boundary data, Int. J. Numer. Engng., Vol.43, pp.479-492, 1998.

[41] Linz P, Numerical methods for Volterra integral equations of the first kind, Comp. J., Vol.12, pp.393-397, 1969.

[42] Lopez S, Fortino S and Casciaro R, An adaptive multigrid solver for plate vibration and buckling problems, Computers and Structures, Vol.69, pp.625-637, 1998.

[43] Lu S and Rizzo FJ, A boundary element strategy for elastostatic inverse problems involving uncertain boundary conditions, Int. J. Numer. Meth. Engng., Vol.46, pp.957-972, 1999.

[44] Mahmoud FA and Saleem MA, Regularization method for solving Radon integral equations, Computers Math. Applic., Vol.25, No.4, pp.3-13, 1993.

[45] Mallardo V and Alessandri C, Inverse problems in the presence of inclusions and unilateral constraints: a boundary element approach, Computational Mechanics, Vol.26, pp.571-581, 2000.

[46] Marin L and Lesnic D, Boundary element solution for the Cauchy problem in linear elasticity using singular value decomposition, Comp. Meth. Appl. Mech. Engrg., Accepted, 2002.

[47] Marin L and Elliott L, Ingham DB and Lesnic D, An iterative boundary element algorithm for a singular Cauchy problem in linear elasticity, Computational Mechanics, Vol.28, pp.479-488, 2002.

[48] Mizuguchi M, Analytical solutions of non-periodic wave generation and its inverse problems, Coastal Engineering in Japan, Vol.39, No.1, pp.1-9, 1996.

[49] Nair MT, A generalization of Arcangeli's method for ill-posed problems leading to optimal rates, Integr. Equat. Oper. Th., Vol.15, pp.1042-1046, 1992.

[50] Neumaier A, Solving ill-condition and singular linear systems: a tutorial on regularization, SIAM Rev., Vol.40, No.3, pp.636-666, 1998.

[51] Ohura Y, Kobayashi K and Onishi K, Boundary element solution for the initial value problem in plane elasticity (II), JASCOME, 13th Symposium on BEM's, pp.95-99, 1996.

[52] Ohura Y, Wang Q and Onishi K, On identifying Dirichlet condition for under-determind problem of the Laplace equation by BEM, Engineering Analysis with Boundary Elements, Vol.26, pp.87-93, 2002.

[53] Onishi K, Kobayashi K and Ohura Y, Numerical solution of a boundary inverse problem for the Laplace equation, Theoretical and Applied Mechanics, Vol.45, pp.257-264, 1996.

[54] Papadrakakis M and Dracopoulos MC, A global preconditioner for the element-by-element solution methods, Computer Methods in Applied Mechanics Engineering, Vol.88, pp.275-286, 1991.

[55] Park HW, Shin S and Lee HS, Determination of an optimal regularization factor in system identification with Tikhonov regularization for linear elastic continua, Int. J. Numer. Meth. Engng., Vol.51, pp.1211-1230, 2001.

[56] Poluektov AR, Short communications: a method of choosing the regularization parameter for the numerical solution of ill-posed problems, Comput. Maths Math. Phys., Vol 32, No.3, pp.397-401, 1992.

[57] Radziuk J, The numerical solution from measurement data of linear integral equations of the first kind, Int. J. Num. Meth. Engrg., Vol.11, pp.729-740,1977.

[58] Rubinstein D, Dynamics of a flexible beam and a system of rigid rods, with fully inverse (one-sided) boundary conditions, Comput. Methods Appl. Engrg., Vol.175, pp.87-97, 1999.

[59] Saint-Georges P, Warzee G, Notay Y and Beauwens R, Problem-dependent preconditioners for iterative solvers in FE elastostatics, Computers and Structures, Vol.73, pp.33-43, 1999.

[60] Shenefelt JR, Luck R, Taylor RP and Berry JT, Solution to inverse heat conduction problems employing singular value decomposition and model-reduction, International Journal of Heat and Mass Transfer, Vol.45, pp.67-74, 2002.

[61] Schmaedeke WW, Approximate solutions of Volterra integral equations of the first kind, J. Math. Anal. Appl., Vol.23, pp.604-613, 1968.

[62] Tang LJ, Estimate of condition number for some discrete ill-posed equations, Journal of Computational Mathematics, Vol.9, No.1, pp.5-8, 1991.

[63] Tikhonov AN and Arsenin VY, Solutions of ill-posed problems, V.H. Winston and Sons, Washington, D.C., 1977.

[64] To WM and Ewins DJ, The role of the generalied inverse in structural dynamics, Journal of Sound and Vibration, Vol.185, No.2, pp.185-195, 1995.

[65] Tyrtyshnikov EE and Chan RH, Spectral equivalence and proper clusters for matrices from the boundary element method, Int. J. Numer. Meth. Engng, Vol.49, pp.1211-1224, 2000.

[66] Ulrich TW, Moslehy FA and Kassab AJ, A BEM based pattern serach solution for a class of inverse elastostatic problems, Int. J. Solids Structures, Vol.33, pp.2123-2131, 1996.

[67] Ventsel ES, Numerical stability in regular BEM schemes for elastostatic problems, Engineering Analysis with Boundary Elements, Vol.22, pp.281-289, 1998.

[68] Wendoloski JC, The reconstruction of a spatially incoherent two-dimensional source in an acoustically rigid rectangular cavity, J. Acoust. Soc. Am., Vol.107, No.1, pp.51-69, 2000.

[69] Yang CY, Solution of an inverse vibration problem using a linear least-squares error method, Appl. Math. Modelling, Vol.20, pp.785-788, 1996.

[70] Yoshimura S, Matsuda A and Yagawa G, New regularization by transformation for neural network based inverse analyses and its application to structure identification, Int. J. Numer. Meth. Engng., Vol.39, pp.3953-3968, 1996.

[71] Zhang F, Kassab J and Nicholson W, A boundary element solution of an inverse elasticity problem and applications to determining residual stress and contact stress, Int. J. Solids Structures, Vol.34, No.16, pp.2073-2086, 1997.

[72] 林晉祥與趙炳焜, 地盤受震反應分析, 地工技術雜誌, 第九期, 第67 80頁, 1985.

[73] 林晉祥與趙炳焜, 地盤受震反應分析-逆向運算, 地工技術雜誌, 第34 37頁, 1985.

[74] 陳正宗與陳桂鴻, 地盤反應逆向運算-病態問題, 土木工程技術, 第七期, 第101 120頁,1996.

[75] 黃光遠與劉小軍, 數學物理反問題, 山東科學技術出版社, 1993.

[76] 蘇超偉, 偏微分方程逆問題的數值方法及其應用, 西北工業大學出版社, 1995.

[77] 葉爲忠, 反算問題專論, 國立海洋大學河海工程學系講義, 1995.

[78] 鮑亦興, 劉佩玲, 王乾盈, 張建成及吳政忠, 波傳反算震測法之研究, 交通部台灣區國道新建工程局, 1993.