

# References

1. M. Abramowitz and I.A. Stegun, *Handbook of Mathematical Functions*, National Bureau of Standards, Washington, DC, 1964.
2. M. Ainsworth and J.T. Oden, *A Posteriori Error Estimation in Finite Element Analysis*. New York, Wiley, 2000.
3. N.V. Alexenko, V.A. Burov and O.D. Rumyantseva, Solution of three-dimensional acoustical inverse problem: II. Modified Novikov algorithm, *Acoust. Phys.*, 54, 407–419, 2008.
4. H. Ammari, E. Iakovleva and S. Moskow, Recovery of small inhomogeneities from the scattering amplitude at a fixed frequency, *SIAM J. Math. Anal.*, 34, 882–900, 2003.
5. H. Ammari and H. Kang, *Reconstruction of Small Inhomogeneities from Boundary Measurements*, Lecture Notes in Mathematics, 1846, Springer-Verlag, Berlin, 2004.
6. H. Ammari, E. Iakovleva, G. Perrusson and D. Lesselier, Music-type electromagnetic imaging of a collection of small three dimensional inclusions, *SIAM J. Sci. Comp.*, 29, 674–709, 2007.
7. Iu. E. Anikonov and E. Anikonov, *Inverse Problems of Kinetic and Other Evolution Equations*, VSP, Utrecht, 2001.
8. S. Arridge, Optical tomography in medical imaging, *Inverse Problems*, 15, 841–893, 1999.
9. M. Asadzadeh and L. Beilina, A posteriori error analysis in a globally convergent numerical method for a hyperbolic coefficient inverse problem, *Inverse Problems*, 26, 115007, 2010.
10. A.B. Bakushinsky and M.Yu. Kokurin, *Iterative Methods for Approximate Solution of Inverse Problems*, Springer, New York, 2004.
11. A.B. Bakushinsky, A posteriori error estimates for approximate solutions of irregular operator equations, *Doklady Mathematics*, 83, 1-2, 2011.
12. W. Bangerth and A. Joshi, Adaptive finite element methods for the solution of inverse problems in optical tomography, *Inverse Problems* 24, 034011, 2008.
13. H. Bateman and A. Erdelyi, *Tables of Integral Transforms*, Vol. 1, McGrawHill, New York, 1954.
14. L. Baudouin and J.-P. Puel, Uniqueness and stability in an inverse problem for the Schrödinger equation, *Inverse Problems*, 18, 1537–1554, 2002.
15. R. Becker and R. Rannacher, An optimal control approach to *a posteriori* error estimation in finite element method, *Acta Numerica*, 10, 1–102, 2001.
16. L. Beilina and C. Johnson, A hybrid FEM/FDM method for an inverse scattering problem. In *Numerical Mathematics and Advanced Applications, ENUMATH 2001*, Springer-Verlag, Berlin, 2001.
17. L. Beilina, Adaptive hybrid FEM/FDM methods for inverse scattering problems, *J. Inverse Problems and Information Technologies*, 1, 73–116, 2002.
18. L. Beilina, Adaptive finite element/difference method for inverse elastic scattering waves, *Applied and Computational Mathematics*, 2, 119–134, 2003.

19. L. Beilina, Efficiency of a Hybrid FEM/FDM methods for elastic waves, *Applied and Computational Mathematics*, 2(1), 13–29, 2003.
20. L. Beilina and C. Johnson, A posteriori error estimation in computational inverse scattering, *Mathematical Models and Methods in Applied Sciences*, 15, 23–37, 2005.
21. L. Beilina and C. Clason, An adaptive hybrid FEM/FDM method for an inverse scattering problem in scanning acoustic microscopy, *SIAM J. Sci. Comp.*, 28, 382–402, 2006.
22. L. Beilina, M. Hatlo and H. Krogstad, Adaptive algorithm for an inverse electromagnetic scattering problem, *Applicable Analysis*, 1, 15–28, 2009.
23. L. Beilina, Adaptive finite element method for a coefficient inverse problem for the Maxwell's system, *Applicable Analysis*, 90:10, 1461–1479, 2011.
24. L. Beilina and M.V. Klibanov, A globally convergent numerical method for a coefficient inverse problem, *SIAM J. Sci. Comp.*, 31, 478–509, 2008.
25. L. Beilina and M.V. Klibanov, Synthesis of global convergence and adaptivity for a hyperbolic coefficient inverse problem in 3D, *J. Inverse and Ill-posed Problems*, 18, 85–132, 2010.
26. L. Beilina and M.V. Klibanov, A posteriori error estimates for the adaptivity technique for the Tikhonov functional and global convergence for a coefficient inverse problem, *Inverse Problems*, 26, 045012, 2010.
27. L. Beilina, M.V. Klibanov and A. Kuzhuget, New a posteriori error estimates for adaptivity technique and global convergence for a hyperbolic coefficient inverse problem, *Journal of Mathematical Sciences*, 172, 449–476, 2011.
28. L. Beilina and M.V. Klibanov, Reconstruction of dielectrics from experimental data via a hybrid globally convergent/adaptive inverse algorithm, *Inverse Problems*, 26, 125009, 2010.
29. L. Beilina, M.V. Klibanov and M.Yu Kokurin, Adaptivity with relaxation for ill-posed problems and global convergence for a coefficient inverse problem, *Journal of Mathematical Sciences*, 167, 279–325, 2010.
30. L. Beilina, K. Samuelsson and K. Åhlander, Efficiency of a hybrid method for the wave equation. In *International Conference on Finite Element Methods*, Gakuto International Series Mathematical Sciences and Applications. Gakkotosho CO., LTD, 2001.
31. M. Bellassoued, Global logarithmic stability in determining the speed of propagation of second-order hyperbolic equation with variable coefficients, *Inverse Problems*, 20, 1033–1052, 2004.
32. M. Bellassoued and M. Yamamoto, Carleman estimates and an inverse heat source problem for the thermoelasticity system, *Inverse Problems*, 27, 015006, 2011.
33. A. Benabdallah, M. Cristofol, P. Gaitan and M. Yamamoto, Inverse problem for a parabolic system with two components by measurements of one component, *Applicable Analysis*, 88, 683–709, 2009.
34. Ju. M. Berezanskii, The uniqueness theorem in the inverse problem of spectral analysis for the Schrödinger equation, *Proceedings of The Moscow Mathematical Society*, 7, 1–62, 1958 (in Russian). English translation in: *American Mathematical Society Translations*, Series 2, V. 35, 137–235, 1964.
35. J. Bikowski, K. Knudsen and J.L. Mueller, Direct numerical reconstruction of conductivities in three dimensions using scattering transforms, *Inverse Problems*, 27, 015002, 2011.
36. M. Born and E. Wolf, *Principles of Optics : Electromagnetic Theory of Propagation, Interference and Diffraction of Light*, Cambridge University Press, Cambridge, 1970.
37. F. Boyer, F. Hubert and J. Le Rousseau, Discrete Carleman estimates for elliptic operators in arbitrary dimension and applications, *SIAM J. Control Optim.*, 48, 5357–5397, 2010.
38. F. Boyer, F. Hubert and J. Le Rousseau, Discrete Carleman estimates for elliptic operators and uniform controllability of semi-discretized parabolic equations, *J. Math. Pures Appl.*, 93, 240–276, 2010.
39. A. Briggs, *Acoustic Microscopy*, Clarendon Press, Oxford, 1992.
40. K. Bube, Convergence of difference methods for one dimensional inverse problems, *IEEE Trans. Geoscience and Remote Sensing*, GE22, 674–682, 1984.
41. J.L. Buchanan, R.P. Gilbert, A. Wirgin and Y.S. Xu, *Marine Acoustics: Direct and Inverse Problems*, SIAM Publications, Philadelphia, 2003.

42. B.M. Budak, A.A. Samarskii and A.N. Tikhonov, *Collection of Problems in Mathematical Physics*, Dover Publications, New York, 1988.
43. A.L. Bukhgeim and M.V. Klibanov, Uniqueness in the large of a class of multidimensional inverse problems, *Soviet Math. Doklady*, 17, 244–247, 1981.
44. A.L. Bukhgeim, Carleman estimates for Volterra operators and uniqueness of inverse problems, in *Non-Classical Problems of Mathematical Physics*, pages 54–64, published by Computing Center of the Siberian Branch of USSR Academy of Science, Novosibirsk, 1981 (in Russian).
45. A.L. Bukhgeim, *Introduction In The Theory of Inverse Problems*, VSP, Utrecht, The Netherlands, 2000.
46. V.A. Burov, S.A. Morozov and O.D. Romyantseva, Reconstruction of fine-scale structure of acoustical scatterers on large-scale contrast background, *Acoust. Imaging*, 26, 231–238, 2002.
47. R. Burridge, The Gelfand-Levitin, the Marchenko, and the Gopinath-Sondhi integral equations of inverse scattering theory, regarded in the context of inverse impulse response problems, *Wave Motion*, 2, 305–323, 1980.
48. F. Cakoni and D. Colton, *Qualitative Methods in Inverse Scattering Theory*, Springer, New York, 2006.
49. H. Cao, M.V. Klibanov and S.V. Pereverzev, A Carleman estimate and the balancing principle in the quasi-reversibility method for solving the Cauchy problem for the Laplace equation, *Inverse Problems*, 25, 35005, 2009.
50. T. Carleman, Sur un probleme d'unicite' pur les systemes d'equations aux derivees partielles a' deux variables independantes, *Ark. Mat. Astr. Fys.*, 26B, No. 17, 1–9, 1939.
51. K. Chadan and P. Sabatier, *Inverse Problems in Quantum Scattering Theory*, Springer, New York, 1989.
52. H.T. Chuah, K.Y. Lee and T.W. Lau, Dielectric constants of rubber and oil palm leaf samples at X-band, *IEEE Trans. on Geoscience and Remote Sensing*, 33, 221–223, 1995.
53. G. Chavent, Deux resultats sur le probleme inverse dans les equations aux derivees partielles du deuxième ordre et sur l'unicité de la solution du problème inverse de la diffusion, *C.R. Acad. Sc. Paris*, 270, 25–28, 1970.
54. G. Chavent, *Nonlinear Least Squares for Inverse Problems: Theoretical Foundations and Step-by-Step Guide for Applications (Scientific Computation)*, Springer, New York, 2009.
55. Y. Chen, Inverse scattering via Heisenberg uncertainty principle, *Inverse Problems*, 13, 253–282, 1997.
56. Y. Chen, R. Duan and V. Rokhlin, On the inverse scattering problem in the acoustic environment, *J. Computational Physics*, 228, 3209–3231, 2009.
57. M. Cheney and D. Isaacson, Inverse problems for a perturbed dissipative half-space, *Inverse Problems*, 11, 865–888, 1995.
58. R. Cipolatti and M. Yamamoto, An inverse problem for a wave equation with arbitrary initial values and a finite time of observation, *Inverse Problems*, 27, 095006, 2011.
59. C. Clason and M.V. Klibanov, The quasi-reversibility method for thermoacoustic tomography in a heterogeneous medium, *SIAM J. Sci. Comp.*, 30, 1–23, 2007.
60. D. Colton and R. Kress, *Inverse Acoustic and Electromagnetic Scattering Theory*, Springer-Verlag, New York, 1992.
61. G. C. Cohen, *Higher order numerical methods for transient wave equations*, Springer-Verlag, Berlin, 2002.
62. M. Cristofol, P. Gaitan and H. Ramoul, Inverse problems for a  $2 \times 2$  reaction-diffusion system using a Carleman estimate with one observation, *Inverse Problems*, 22, 1561–1573, 2006.
63. M. DeAngelo and J.L. Mueller, 2D d-bar reconstructions of human chest and tank using an improved approximation to the scattering transform, *Physiological Measurement*, 31, 221–232, 2010.
64. C. Draft, G. Briggs, The elastic microstructure of various tissues, *J. Acoust. Soc. Am.*, 85, 416–422, 1989.
65. H.W. Engl, M. Hanke and A. Neubauer 2000 *Regularization of Inverse Problems*, Kluwer Academic Publishers, Boston, 2000.

66. B. Engquist and A. Majda, Absorbing boundary conditions for the numerical simulation of waves *Math. Comp.* 31, 629–651, 1977.
67. K. Eriksson, D. Estep and C. Johnson, *Calculus in Several Dimensions*, Springer, Berlin, 2004.
68. T. Feng, N. Yan and W. Liu, Adaptive finite element methods for the identification of distributed parameters in elliptic equation, *Advances in Computational Mathematics*, 29, 27–53, 2008.
69. A. Friedman, *Partial Differential Equations of Parabolic Type*, Prentice Hall, Inc., Englewood Cliffs, N.J., 1964.
70. T. Gardner, J. Elliott, Z. Sklar, G. Briggs, Acoustic microscope study of the elastic properties of fluorapatite and hydroxyapatite, tooth enamel and bone, *J. Biomech.*, 25, 1265–1277, 1992.
71. H.H. Gerrish, W.E. Jr. Dugger and R.M. Robert, *Electricity and Electronics*, Merseyside, UK: Goodheart-Willcox Co. Inc., 2004.
72. D. Gilbarg and N.S. Trudinger, *Elliptic Partial Differential Equations of Second Order*, Springer-Verlag, Berlin, 1983.
73. Yu. A. Grayzin, M.V. Klibanov and T.R. Lucas, Numerical solution of a subsurface inverse imaging problem, *SIAM J. Appl. Math.*, 62, 664–683, 2001.
74. A. Griesbaum, B. Kaltenbacher and B. Vexler, Efficient computation of the Tikhonov regularization parameter by goal-oriented adaptive discretization *Inverse Problems* 24, 025025, 2008.
75. P.G. Grinevich, The scattering transform for the two-dimensional operator with a potential that decreases at infinity at fixed nonzero energy *Russ. Math. Surv.*, 55, 3–70, 2000.
76. D. Grosenick, H. Wabnitz, H.R. Rinneberg, K.T. Moesta and P.M. Schlag, Development of a time-domain optical mammograph and first *in vivo* applications, *Applied Optics*, 38, 2927–2943, 1999.
77. A. Hasanov, Simultaneous determination of the source terms in a linear hyperbolic problem from the final overdetermination: weak solution approach, *IMA J. Appl. Math.*, 74, 1–19, 2009.
78. T.J.R. Hughes, *The finite element method*, Prentice Hall, Englewood Cliffs, New Jersey, 1987.
79. O.Yu. Imanuvilov and M. Yamamoto, Lipschitz stability in inverse parabolic problems by the Carleman estimate, *Inverse Problems*, 14, 1229–1245, 1998.
80. O.Yu. Imanuvilov and M. Yamamoto, Global Lipschitz stability in an inverse hyperbolic problem by interior observations, *Inverse Problems*, 17, 717–728, 2001.
81. O.Yu. Imanuvilov and M. Yamamoto, Determination of a coefficient in an acoustic equation with a single measurement, *Inverse Problems*, 19, 157–171, 2003.
82. D. Isaacson, J.L. Mueller, J.C. Newell and S. Siltanen, Imaging cardiac activity by the D-bar methods for electrical impedance tomography, *Physiological Measurements*, 27, S43-S50, 2006.
83. V. Isakov, *Inverse Source Problems*, AMS, Providence, R.I., 1990.
84. V. Isakov, *Inverse Problems for Partial Differential Equations*, Springer, New York, 2005.
85. V. K. Ivanov, On ill-posed problems, *Mat. USSR Sb.*, 61, 211–223, 1963.
86. V.K. Ivanov, V.V. Vasin and V.P. Tanana, *Theory Of Linear Ill-posed Problems And Its Applications*, VSP, Utrecht, 2002.
87. C. Johnson, *Numerical solution of partial differential equations by the finite element method*, Cambridge University Press, Cambridge, 1987.
88. C. Johnson and A. Szepessy, Adaptive finite element methods for conservation laws based on a posteriori error estimation, *Comm. Pure Appl. Math.*, 48, 199–234, 1995.
89. P. Joly, (2003), Variational methods for time-dependent wave propagation problems, Lecture Notes in Computational Science and Engineering, Springer.
90. S.I. Kabanikhin, A.D. Satybaev and M.A. Shishlenin, *Direct Methods of Solving Multidimensional Inverse Hyperbolic Problems*, VSP, Utrecht, 2004.
91. S.I. Kabanikhin, A. Hasanov and A.V. Penenko, A gradient descent method for solving an inverse coefficient heat conduction problem, *Numerical Anal. Appl.*, 1, 34–45, 2008.

92. S.I. Kabanikhin and M.A. Shishlenin, Numerical algorithm for two-dimensional inverse acoustic problem based on Gel'fand-Levit-Krein equation, *J. Inverse and Ill-Posed Problems*, 18, 979–995, 2011.
93. B. Kaltenbacher, A. Neubauer and O. Scherzer, *Iterative Regularization Methods for Nonlinear Ill-Posed Problems*, de Gruyter, New York, 2008.
94. A. Kirsch, *An Introduction To the Mathematical Theory of Inverse Problems*, Springer, New York, 2011.
95. M.V. Klibanov, Uniqueness of solutions in the ‘large’ of some multidimensional inverse problems, in *Non-Classical Problems of Mathematical Physics*, 101–114, 1981, published by Computing Center of the Siberian Branch of the USSR Academy of Science, Novosibirsk (in Russian).
96. M.V. Klibanov, On a class of inverse problems, *Soviet Math. Doklady*, 26, 248–250, 1982.
97. M.V. Klibanov, Inverse problems in the ‘large’ and Carleman bounds, *Differential Equations*, 20, 755–760, 1984.
98. M.V. Klibanov, Uniqueness of the solution of two inverse problems for the Maxwell’s system, *Computational Mathematics and Mathematical Physics*, 26, 1063–1071, 1986.
99. M.V. Klibanov, Inverse problems and Carleman estimates, *Inverse Problems*, 8, 575–596, 1992.
100. M.V. Klibanov and A. Timonov, A sequential minimization algorithm based on the convexification approach, *Inverse Problems*, 19, 331–354, 2003.
101. M.V. Klibanov and A. Timonov, A unified framework for constructing the globally convergent algorithms for multidimensional coefficient inverse problems, *Applicable Analysis*, 83, 933–955, 2004.
102. M.V. Klibanov and A. Timonov, *Carleman Estimates for Coefficient Inverse Problems and Numerical Applications*, VSP, Utrecht, 2004.
103. M.V. Klibanov and A. Timonov, Global uniqueness for a 3D/2D inverse conductivity problem via the modified method of Carleman estimates, *J. Inverse and Ill-Posed Problems*, 13, 149–174, 2005.
104. M.V. Klibanov and M. Yamamoto, Lipschitz stability estimate of an inverse problem for an acoustic equation, *Applicable Analysis*, 85, 515–538, 2006.
105. M.V. Klibanov and F. Santosa, A computational quasi-reversibility method for Cauchy problems for Laplace’s equation, *SIAM J. Appl. Math.*, 51, 1653–1675, 1991.
106. M.V. Klibanov and Rakesh, Numerical solution of a timelike Cauchy problem for the wave equation, *Mathematical Methods in Applied Sciences*, 15, 559–570, 1992.
107. M.V. Klibanov, Estimates of initial conditions of parabolic equations and inequalities via lateral Cauchy data, *Inverse Problems*, 22, 495–514, 2006.
108. M.V. Klibanov, A.V. Kuzhuget, S.I. Kabanikhin and D.V. Nechaev, A new version of the quasi-reversibility method for the thermoacoustic tomography and a coefficient inverse problem, *Applicable Analysis*, 87, 1227–1254, 2008.
109. M.V. Klibanov, M. A. Fiddy, L. Beilina, N. Pantong and J. Schenk, Picosecond scale experimental verification of a globally convergent numerical method for a coefficient inverse problem, *Inverse Problems*, 26, 045003, 2010.
110. M.V. Klibanov, J. Su, N. Pantong, H. Shan and H. Liu, A globally convergent numerical method for an inverse elliptic problem of optical tomography, *Applicable Analysis*, 6, 861–891, 2010.
111. M.V. Klibanov, A.B. Bakushinsky and L. Beilina, Why a minimizer of the Tikhonov functional is closer to the exact solution than the first guess, *J. Inverse and Ill-Posed Problems*, 19, 83–105, 2011.
112. M.V. Klibanov, Uniqueness of an inverse problem with single measurement data generated by a plane wave in partial finite differences, *Inverse Problems*, 27, 115005, 2011.
113. A.N. Kolmogorov and S.V. Fomin, *Elements of the Theory of Functions and Functional Analysis*, Graylock Press, Albany, NY, 1957.
114. A.V. Kuzhuget and M.V. Klibanov, Global convergence for a 1-D inverse problem with application to imaging of land mines, *Applicable Analysis*, 89, 125–157, 2010.

115. A.V. Kuzhuget, N. Pantong and M.V. Klibanov, A globally convergent numerical method for a coefficient inverse problem with backscattering data, *Methods and Applications of Analysis*, 18, 47–68, 2011.
116. A.V. Kuzhuget, L. Beilina and M.V. Klibanov, Approximate global convergence and quasi-reversibility for a coefficient inverse problem with backscattering data, *Journal of Mathematical Sciences*, 181, 19–49, 2012.
117. A.V. Kuzhuget, L. Beilina, M.V. Klibanov, A Sullivan, L. Nguyen and M.A. Fiddy, Blind experimental data collected in the field and an approximately globally convergent inverse algorithm, <http://www.ma.utexas.edu/mparc/>.
118. O. A. Ladyzhenskaya and N. N. Uralceva, *Linear and Quasilinear Elliptic Equations*, Academic Press, New York, 1969.
119. O. A. Ladyzhenskaya, *Boundary Value Problems of Mathematical Physics*, Springer Verlag, Berlin, 1985.
120. O.A. Ladyzhenskaya, V.A. Solonnikov and N.N. Uralceva, *Linear and Quasilinear Equations of Parabolic Type*, AMS, Providence, R.I., 1968.
121. R. Lattes and J.-L. Lions, *The Method of Quasireversibility: Applications to Partial Differential Equations*, Elsevier, New York, 1969.
122. M.M. Lavrentiev, *Some Improperly Posed Problems of Mathematical Physics*, Springer, New York, 1967.
123. M.M. Lavrentiev, K.G. Reznitckaya and V.G. Yakhno, *One-Dimensional Inverse Problems of Mathematical Physics*, AMS, Providence, RI, 1986
124. M.M. Lavrentiev, V.G. Romanov and S.P. Shishatskii, *Ill-Posed Problems of Mathematical Physics and Analysis*, AMS, Providence, R.I., 1986.
125. J. Li, J. Xie and J. Zou, An adaptive finite element reconstruction of distributed fluxes, *Inverse Problems*, 27, 075009, 2011.
126. L. Nguyen, D. Wong, M. Ressler, F. Koenig, B. Stanton, G. Smith, J. Sichina and K. Kappra, Obstacle avoidance and concealed target detection using the Army Research Lab ultra-wideband synchronous impulse Reconstruction (UWB SIRE) forward imaging radar, *Proc. SPIE*, 6553, pages 65530H (1)-65530H (8), 2007.
127. V.P. Mikhailov, *Partial Differential Equations*, imprint, Moscow: Mir Publishers, 1978.
128. M. Minoux, *Mathematical Programming: Theory and Algorithms*, Wiley and Sons, Chichester, 1986.
129. J. Mueller and S. Siltanen. Direct reconstructions of conductivities from boundary measurements, *SIAM J. Sci. Comp.*, 24, 1232–1266, 2003.
130. R.G. Novikov, Multidimensional inverse spectral problem for the equation  $-\Delta\psi + (v(x) - Eu(x))\psi = 0$  *Functional Analysis and Its Applications*, 22, 11–22, 1988.
131. R.G. Novikov, The inverse scattering problem on a fixed energy level for the two-dimensional Schrödinger operator, *J. Func. Anal. and Its Applications*, 103, 409–463, 1992.
132. R.G. Novikov, The  $\partial$ –bar approach to approximate inverse scattering at fixed energy in three dimensions, *Int. Math. Res. Reports*, 6, 287–349, 2005.
133. J.R. Reitz, F.J. Milford, and R.W. Christy, *Foundations of Electromagnetic Theory*, Reading, Mass.: Addison-Wesley, 1980.
134. J. Nocedal, Updating quasi-Newton matrices with limited storage, *Mathematics of Comp.*, V.35, N.151, 773–782, 1991.
135. N. Pantong, J. Su, H. Shan, M.V. Klibanov and H. Liu, A globally accelerated reconstruction algorithm for diffusion tomography with continuous-wave source in arbitrary convex shape domain, *J. of the Optical Society of America*, A, 26, 456–472, 2009.
136. O. Poisson, Uniqueness and Hölder stability of discontinuous diffusion coefficients in three related inverse problems for the heat equation, *Inverse Problems*, 24, 025012, 2008.
137. B.T. Polyak, *Introduction to Optimization (Translations Series in Mathematics and Engineering)*, New York: Optimization Software, Publications Division, 1987
138. A.I. Prilepko, D.G. Orlovskii and I.A. Vasin, *Methods For Solving Inverse Problems In Mathematical Physics*, Marcel Dekker, Inc., New York, 2000.
139. R. Ramlau, A steepest descent algorithm for the global minimization of the Tikhonov functional, *Inverse Problems*, 18, 381–405, 2002.

140. R. Ramlau, TIGRA- an iterative algorithm for regularizing nonlinear ill-posed problems, *Inverse Problems*, 19, 433–465, 2003.
141. S.I. Repin, *A Posteriori Estimates for Partial Differential Equations*, de Gruyter, Berlin, 2008.
142. K.G. Reznitckaya, Connection between solutions of different types of Cauchy problems and inverse problems, in *Mathematical Problems of Geophysics*, issue 5, part 1, 55–62, 1974, published by Computing Center of the Siberian Branch of the USSR Academy of Science, Novosibirsk (in Russian).
143. V.G. Romanov, *Integral Geometry and Inverse Problems for Hyperbolic Equations*, Springer-Verlag, Berlin, 1974.
144. V.G. Romanov 1986 *Inverse Problems of Mathematical Physics* (Utrecht, The Netherlands: VNU).
145. V.G. Romanov, On smoothness of a fundamental solution to a second order hyperbolic equation, *Siberian Math. J.*, 50, 700–705, 2009.
146. A.A. Samarskii, *The Theory of Difference Schemes*, Marcel Dekker, New York, 2001.
147. H. Shan, M.V. Klibanov, J. Su, N. Pantong and H. Liu, A globally accelerated numerical method for optical tomography with continuous wave source, *J. Inverse and Ill-Posed Problems*, 16, 765–792, 2008.
148. Software package Wave Equations Solutions at <http://www.waves24.com/>.
149. J. Su, H. Shan, H. Liu and M.V. Klibanov, Reconstruction method from a multiple-site continuous-wave source for three-dimensional optical tomography, *J. Optical Society of America A*, 23, 2388–2395, 2006.
150. J. Su, M. V. Klibanov, Y. Liu, Z. Lin, N. Pantong, and H. Liu, An inverse elliptic problem of medical optics with experimental data, available on-line at <http://www.ma.utexas.edu/mp-arc/>.
151. Tables of dielectric constants at <http://www.asiinstr.com/technical/Dielectric%20Constants.htm>.
152. A. N. Tikhonov, On the stability of inverse problems, *Doklady of the USSR Academy of Science*, 39, 195–198, 1943 (in Russian).
153. A. N. Tikhonov and V. Y. Arsenin. *Solutions of Ill-Posed Problems*, Winston and Sons, Washington, DC, 1977.
154. A.N. Tikhonov, A.V. Goncharsky, V.V. Stepanov and A.G. Yagola, *Numerical Methods for the Solution of Ill-Posed Problems*, London: Kluwer, London, 1995.
155. J. Su, H. Shan, H. Liu and M. V. Klibanov, Reconstruction method from a multiple-site continuous-wave source for three-dimensional optical tomography, *J. Optical Society of America*, 23, 2388–2395, 2006.
156. B. J. Tromberg, O. Coquoz, H. B. Fishkin, T. Pham, E. R. Anderson, J. Bytler, M. Cahn, J. D. Gross, V. Venugopalan and D. Pham, Non-invasive measurements of breast tissue optical properties using frequency-domain photon migration, *Proc. Trans. R. Society, London*, 352, 661–668, 1997.
157. J. Xin, M. V. Klibanov, Comparative studies of the globally convergent convexification algorithm with application to imaging of antipersonnel land mines, *Applicable Analysis*, 86, 1147–1176, 2007.
158. J. Xin and M. V. Klibanov, Numerical solution of an inverse problem of imaging of antipersonnel land mines by the globally convergent convexification algorithm, *SIAM J. Sci. Comp.*, 30, 3170–3196, 2008.
159. J. Xin and M. V. Klibanov, High speed imaging of antipersonnel land mines by the convexification algorithm for a simplified mathematical model in two dimensions, *J. Inverse and Ill-Posed Problems*, 17, 187–207, 2009.
160. J. Xin, L. Beilina and M. V. Klibanov, Globally convergent numerical methods for coefficient inverse problems for imaging inhomogeneities, *IEEE J. Computing in Science and Engineering*, 12, 64–77, 2010.
161. M. Yamamoto, Carleman estimates for parabolic equations and applications, *Inverse Problems*, 25, 123013, 2009.