Fasano, A. and M. Primicerio (1979): Liquid flow in partially saturated porous media. J. Inst. Math. Applics. 23, 503-517.

Fasano, A., M. Primicerio and S. Kamin (1978): Regularity of weak solutions of one-dimensional two phase Stefan problems. Ann. Mat. Pura Appl. 115, 341-348.

Fasano, A., M. Primicerio and F. Fontanella (1973): An efficient method for solving free-boundary diffusion problems. Meccanica 8, 223-235.

Fedorenko, R.P. (1975): A difference scheme for Stefan's problem. USSR Comp. Math.a.math.Phys. 15, (5) 246-251.

Ferris, D.H. (1975): Fixation of a moving boundary by means of a change of independent variable. J.R. Ockendon and W.R. Hodgkins eds., Clarendon Press, Oxford, 251-255.

Fox, L. (1975): What are the best numerical methods? Moving boundary problems in heat flow and diffusion. J.R. Ockendon and W.R. Hodgkins eds., Clarendon Press, Oxford, 210-241.

Fremond, M. (1974): Variational formulation of the Stefan problem-coupled Stefan problem-frost propagation in porous media. Computational Methods in Nonlinear Mechanics, J.T. Oden et al., eds. The Texas Inst. for Computational Mechanics, 341-350.

Friedman, A. (1959): Free boundary problems for parabolic equations, I: Melting of solids. J. Math. Mech. 8, 499-518.

Friedman, A. (1960a): Free boundary problems for parabolic equations, II: Evaporation and condensation of a liquid drop. J. Math. Mech. 9, 19-66.

Friedman, A. (1960b): Free boundary problems for parabolic equations, III: Dissolution of a gas bubble in liquid. J. Math. Mech. 9, 327-345.

Friedman, A. (1960c): Remarks on Stefan-type free boundary problems for parabolic equations. J. Math. Mech. 9, 885-904.

Friedman, A. (1968a): The Stefan problem in several space variables. Trans. AMS 133, 51-87.

Friedman, A. (1968b): One dimensional Stefan problems with non-monotone free boundary. Trans. AMS 133, 89-114.

Friedman, A. (1975): Parabolic variational inequalities in one space dimension and smoothness of the free boundary. J. Functional Anal. 18, 151-176.

Friedman, A. (1976a): Analyticity of the free boundary for the Stefan problem. Arch. Rat. Mech. Anal. 61, 97-125.

Friedman, A. (1976b): A class of quasi-variational inequalities, II. J. Differential Equations 22, 379-401.

Friedman, A. (1978): One phase moving boundary problems. Conference on Moving Boundary Problems (Tennessee Sept. 1977), Academic Press, New York, 25-41.

Friedman, A. and R. Jensen (1975): A parabolic quasi-variational inequality arising in hydraulics. Ann. Scuola norm. sup. Pisa 2 (IV), 421-468.

Friedman, A. and R. Jensen (1977): Convexity of the free boundary in the Stefan problem and in the dam problem. Arch. Rat. Mech. Anal. 67, 1-14.

Friedman, A. and D. Kinderlehrer (1976): A one phase Stefan problem. Indiana Univ. Math. J. 24, 2005-1035.

Friedman, A. and D. Kinderlehrer (1975): A class of parabolic quasi-variational inequalities. J. Differential Equations 21, 395-416.

Fulks, W.B. and R.B. Günther (1969): A free boundary problem and an extension of Muskat's model. Acta Math. 122, 273-300.

Gaipova, A.N. (1968): A homogeneous implicit difference scheme for the solution of an evolutionary equation with phase variations. USSR Comp. Math. and math. Phys. 8, (3), 40-53.

Gajewski, H. (1977): Stabilitätsaussagen für einige Aufgaben mit freier Grenze. ZAMM 57, 439-447.

George, J. and P.S. Damle (1975): On the numerical solution of free boundary problems. Internat. J. Numer. Methods Engrg. 9, 239-245.

Gindikin, S.G. and M.V. Fedorjuk (1973): Asymptotic behavior of the fundamental solution of a parabolic equation with constant coefficients. Uspehi Mat. Nauk 28, 235-236.

Glashoff, K. and B. Werner (1979): Monotonicity in a Stefan problem for the heat equation. Numer. Funct. Anal. Optimiz. 1 (4), 431-440.

Goodman, T.R. and J.J. Shea (1960): The melting of finite slabs. J. Appl. Mech. 27, 16-24.

Grigelionis, I. and A.N. Shiryaev (1966): On Stefan's problem and optimal stopping rules for Markov processes. Theor. Probability Appl. 2, 541-558.

Hill, C.D. and D.B. Kotlow (1972a): Classical solutions in the large of a two-phase free boundary problem, I. Arch. Rat. Mech. Anal. 45, 63-78.

Hill, C.D. and D.B. Kotlow (1972b): Classical solutions in the large of a two-phase free boundary problem, II. Arch. Rat. Mech. Anal. 47, 369-379.

Hoffmann, K.-H. (1978): Monotonie bei nichtlinearen Stefan-Problemen. ISNM 39, 162-190.

Hoffmann, K.-H. (1979): Monotonie bei Zweiphasen-Stefan-Problemen. Numer. Funct. Anal. Optimiz. 1, 79-112.

Höhn, W. (1978): Konvergenzordnung bei einem expliziten Differenzenverfahren zur numerischen Lösung des Stefan-Problems. ISNM 39, 191-213.

Huber, A. (1939): Über das Fortschreiten der Schmelzgrenze in einem linearen Leiter. ZAMM 19, 1-21.

Ichikawa, Y. and N. Kikuchi (1979): A one-phase multi-dimensional Stefan problem by the method of variational inequalities. Internat. J. Numer. Methods Engrg. 14, 1197-1220.

Jakubov, S. (1975): The uniqueness of the solution of a certain class of problems with unknown boundary for a second order parabolic equation. Izv. Akad. Nauk USSR Ser. Fiz. Mat. 4, 35-39.

Junusov, M. (1976): The variational approach to the solution of a Stefan type problem. Dokl. Akad. Nauk Tadzik. SSR 19, 8-10.

Jerome, J. (1976): Existence and approximation of weak solutions of the Stefan problem with nonmonotone non-linearities. Lecture Notes Math. 506, 108-156.

Jerome, J. (To appear): Nonlinear equations of evolution and a generalized Stefan problem.

Kamenomostskaja, S.L. (1961): On the Stefan problem. Mat. Sb. 53, 489-514.

Kamynin, L.I. (1963): On the existence of a solution of Verigin's problem. USSR Comput. Math. and math.Phys. 2, 954-987.

Kikuchi, N. and Y. Ichikawa (1979): Numerical methods for a two-phase Stefan problem by variational inequalities. Internat. J. Numer. Methods Engrg. 14, 1221-1239.

Kinderlehrer, D. (1978a): Variational inequalities and free boundary problems. Bull. Amer. Math. Soc. 84, 7-26.

Kinderlehrer, D. (1978b): Régularité dans les problèmes elliptiques à frontière libre. C.R. Acad. Sci. Paris Sér. A-B 286, A1187-A1190.

Kinderlehrer, D. and L. Nirenberg (1977): Regularity in free boundary problems. Ann. Scuola norm. sup. Pisa 4 (IV), 373-391.

Kinderlehrer, D. and L. Nirenberg (1978a): The smoothness of the free boundary in the one-phase Stefan problem. Comm. Pure Appl. Math. 31, 257-282.

Kinderlehrer, D. and L. Nirenberg (1978b): Analyticity at the boundary of solutions of nonlinear second-order parabolic equations. Comm. Pure Appl. Math. XXXI, 283-338.

Kolodner, I.I. (1956): Free boundary problems for the heat equation with applications to problems of change of phase. Comm. Pure Appl. Math. 9, 1-31.

Kolata, G.B. (1976): Moving boundary problems: Advances on several fronts. Science 191, 841-

Kotlov, D.B. (1973): A free boundary problem connected with the optimal stopping problem for diffusion processes. Trans. AMS 184, 457-478.

Kruzhov, S. (1967): On some problems with unknown bound-aries for the heat conduction equation. J. Appl. Math. Mech. 31, 1009-1020.

Kyner, W.T. (1959a): On a free boundary value problem for the heat equations. Quart. J. Appl. Math. 17, 305-310.

Kyner, W.T. (1959b): An existence and uniqueness theorem for a nonlinear Stefan problem. J. Math. Mech. 8, 483-498.

Landau, H.A. (1950): Heat conduction in a melting solid. Quart. J. Appl. Math. 8, 81-94.

Li-Shang, J. (1963): The proper posing of free boundary problems for non-linear parabolic differential equa-tions. Chinese Math. 3, 399-418.

Li-Shang, J. (1965): Existence and differentiability of the solution of a two-phase Stefan problem for quasi-linear parabolic equations. Acta Math. Sinica 15, 6, 749-764.

Lotkin, M. (1960/61): The calculation of heat flow in melting solids. Quart. J. Appl. Math. 18, 79-85.

Meadley, C.K. (1971): Back diffusion in a finite medium with a moving boundary. Quart. J. Mech. Appl. Math. 24, 43-51.

Meyer, G.H. (1970): On a free interface problem for linear ordinary differential equations and the one-phase Stefan problem. Numer. Math. 16, 248-267.

Meyer, G.H. (1971): A numerical method for two-phase Stefan problems. SIAM J. Numer. Anal. 8, 555-568.

Meyer, G.H. (1973): Multidimensional Stefan problems. SIAM J. Numer. Anal. 10, 522-538.

Meyer, G.H. (1977a): One-dimensional parabolic free boundary problems. SIAM Review 19, 17-34.

Meyer, G.H. (1977b): An alternating direction method for multidimensional parabolic free surface problems. Internat. J. Numer. Methods Engrg. 11, 741-752.

Meyer, G.H. (1978a): The numerical solution of multidimensional Stefan problems - a survey. Moving boundary problems. Proc. Symp. and Workshop, Gatlinburg, Tenn. 1977, Academic Press, N.Y., 73-89.

Meyer, G.H. (1978b): The numerical solution of Stefan problems with front-tracking and smoothing methods. Appl. Math. Comp. 4, 283-306.

Mikulec, A.T. (1976): The classical solution of the Stefan problem for systems of equations of parabolic type with exterior fronts. Bul. Akad. Štiince RSS Moldoven, 14-24, 94.

Millinazzo, F. and G.W. Bluman (1975): Numerical similarity solutions to Stefan problems. ZAMM 55, 423-429.

Miranker, W.L. (1958): A free boundary value problem for the heat equation. Quart. J. Appl. Math. 16, 121-130.

Miranker, W.L. and J.B. Keller (1960): The Stefan problem for a nonlinear equation. J. Math. Mech. 9, 67-70.

van Moerbeke, R. (1976): On optimal stopping and free boundary problems. Arch. Rat. Mech. Anal. 60, 101-148.

Mori, M. (1975): Numerical solution of the Stefan problem by the finite element method. Mem. Numer. Math. 2.

Mori, M. (1976): A finite element method for solving moving boundary problems. IFIP Working Conference on Modeling of Environmental Systems, Tokyo, 167-171, 35-44.

Moskal, M.Z. and A.T. Mikulec (1975): The existence of the classical solution of the Stefan problem for a system of parabolic equations. Mat. Issled 10 (36), 192-211, 286.

Nitsche, J.A. (1978a): Finite element approximation to the one-dimensional Stefan-problem. Proc. on Recent Advances in Numerical Analysis, C. de Boor and G. Golub eds., Academic Press, New York, 119-142.

Nitsche, J.A. (1978b): Approximation des eindimensionalen Stefan-Problems durch finite Elemente. International Congress of Mathematicians, Helsinki (to appear).

Nitsche, J.A. (1979): Finite element approximations for free boundary problems, TICOM Second International Conference on Computational Methods in Nonlinear Mechanics, Austin, Texas, (to appear).

Oleinik, O.A. (1960): A method of solution of the general Stefan problem. Sov. Math. Dokl. 1, 1350-1354.

Oulton, D.B., D.J. Wollkind and R.N. Maurer (1979): A stability analysis of a prototype moving boundary problem in heat flow and diffusion. Amer. Math. Monthly 86, 175-186.

Primicerio, M. (1968/69): Sur une classe de problèmes du type de Stefan. Annuaire Univ. Sofia Fac. Phys. 63, 83-90.

Primicerio, M. (1970): Stefan-like problems with space dependent latent heat. Meccanica 5, 187-190.

Primicerio, M. (1973/74): Problemi a contorno libero per equazione della diffusione. Rend. Sem. Mat. Torino 32, 183-206.

Quilghini, D. (1963a): Su di un nuovo problema del tipo di Stefan. Ann. Mat. P. Appl. 62, 59-98.

Quilghini, D. (1963b): Sul compartomento asintotico delle soluzioni in un problema del tipo di Stefan. Atti del Semin. Mat. Fiz. Univ. Modena 12, 107-120.

Quilghini, D. (1965): Un teorema di unicita per un problema unidimensionale non lineare del tipo di Stefan. Matematiche (Catania) 20, 142-155.

Quilghini, D. (1967): Sul problema inverso di quello di Stefan. Riv. Mat. Univ. Parma 8, 131-142.

Rogers, J.C.W. (1977): A free boundary problem as diffusion with non-linear absorption. J. Inst. Math. Applics. 20, 261-268.

Rogers, J.C.W., A.E. Berger and M. Ciment (1979): The alternating phase truncation method for numerical solution of a Stefan problem. SIAM J. Numer. Anal. 16, 563-587.

Rose, M. (1960): A method for calculating solutions of parabolic equations with a free boundary. Math. Comp. 14, 249-256.

Sachs, A. (1975): Zur numerischen Behandlung freier Randwertprobleme parabolischer Differentialgleichungen. ISNM 26, 119-125.

Sackett, G.G. (1971a): Numerical solution of a parabolic free boundary problem arising in statistical decision theory. Math. Comp. 25, 425-434.

Sackett, G.G. (1971b): An implicit free boundary problem for the heat equation. SIAM J. Numer. Anal. 8, 80-95.

Samarskii, A.A. and B.D. Moiseyenko (1965): An economic continuous calculation scheme for the Stefan multidimensional problem. USSR Comput. Math. and math. Phys. 5, 43-58.

Schatz, A. (1969): Free boundary problems of Stefan type with prescribed flux. J. Math. Anal. Appl. 23, 569-580.

Schaeffer, D. (1976): A new proof of infinite differentiability of the free boundary in the Stefan problem. J. Differential Equations 20, 266-269.

Selig, F. (1956): Bemerkungen zum Stefanschen Problem. Österr. Ing. Archiv 10, 277-280.

Sestini, G. (1952): Esistenza di una soluzione in problemi analoghi a quello di Stefan. Riv. Mat. Univ. Parma 2, 3-22.

Sestini, G. (1960a): Sul problema unidimensionale non lineare di Stefan in uno strato piano indefinito. Ann. Mat. P. Appl. 51, 204-224.

Sestini, G. (1960b): Problemi di diffusione lineari a quello di Stefan. Conf. Sem. Mat. Univ. Bari 55/56, 1-28.

Sestini, G. (1961): Sul problema non lineare di Stefan in strati cilindrici osferici. Ann. Mat. P. Appl. 56, 193-207.

Sestini, G. (1967): Problemi analoghi a quello di Stefan e loro attualità. Rend. Sem. Mat. Fis. Milano 37, 39-50.

Sherman, B. (1965): A free boundary problem for the heat equation with heat input at a melting interface. Quart. J. Appl. Math. 23, 337-347.

Sherman, B. (1967): A free boundary problem for the heat equation with prescribed flux at both fixed face and melting interface. Quart. J. Appl. Math. 25, 53-63.

Sherman, B. (1970): A general one-phase Stefan problem. Quart. J. Appl. Math. 28, 377-382.

Sherman, B. (1971a): General one-phase Stefan problems and free boundary problems for the heat equations with Cauchy data prescribed on the free boundary. SIAM J. Appl. Math. 20, 555-570.

Sherman, B. (1971b): Free boundary problems for the heat equation in which the moving boundary coincides initially with the fixed face. J. Math. Anal. Appl. 33, 449-466.

Siskin, G.I. (1975): A certain problem of Stefan type with a discontinuous movable boundary. Dokl. Akad. Nauk SSSR 224, 1276-1278.

Solomon, A. (1966): Some remarks on the Stefan problem. Math. Comp. 20, 347-360.

Solov'eva, E.N. and A.B. Uspenskii (1975a): Direct calculation schemes for the numerical solution of the Stefan problem for the two-dimensional heat equation. Izdat. Moskov. Univ. Moscow, 24-37.

Solov'eva, E.N. and A.B. Uspenskii (1975b): Direct calculation schemes for the numerical solution of boundary-value problems with unknown boundaries for one-dimensional equations of parabolic type. Izdat. Moskov. Univ., Moscow, 3-23.

Stefan, J. (1889): Über einige Probleme der Theorie der Wärmeleitung. Sitz.-Ber. Wien Akad. Math. Naturw. 98, 473-484.

Tadjbaksh, I. and W. Liniger (1964): Free boundary problems with regions of growth and decay. Quart. J.Mech. Appl. Math. 17, 141-155.

Tao, L.N. (1978): The Stefan problem with arbitrary initial and boundary conditions. Quart.J.Appl.Math. 34, 223-233.

Tao, L.N. (1979a): On solidification problems including the density jump at the moving boundary. Quart. J. Mech. Appl. Math. 32, 175-185.

Tao, L.N. (1979b): On free boundary problems with arbitrary initial and flux conditions. Journal of Appl. Math. and Phys. (ZAMP) 30, 416-426.

Tayler, A.B. (1975): The mathematical formulation of Stefan problems. Moving boundary problems in heat flow and diffusion. J.R. Ockendon and W.R. Hodgkins eds., Clarendon Press, Oxford, 120-137.

Torelli, A. (1975): Su un problema a frontiera libera di evoluzione. Bollettino U.M.I. (4) 11, 559-570.

Torelli, A. (1977): Existence and uniqueness of the solution for a non steady free boundary problem. Bolletti-no U.M.I. 14-B, 423-466.

Trench, W.E. (1959): On an explicit method for the solution of a Stefan problem. J. of SIAM 7, 184-204.

Vasilev, F.P. (1968): The method of straight lines for the solution of a one-phase problem of the Stefan type. USSR. Comp. Math. and math. Phys. 8 (1), 81-101.

Ventsel, T.D. (1960): A free boundary problem for the heat equation. Sov. Math. Dokl. 1, 358-361.

Wellford, L.C., Jr. and R.M. Ayer (1977): A finite element free boundary formulation for the problem of multi-phase heat conduction. Internat. J. Numer. Methods Engrg. 11, 933-943.

Wilson, D.G., A.D. Solomon and P.T. Boggs (1978): Moving boundary problems, Proc. Symp. and Workshop, Gatlinburg, Tenn., Sept. 26-28, 1977. Academic Press, New York.

Wu, T.S. (1966) : Bounds in melting slab with several transformation temperatures. Quart. J. Mech. Appl. Math. 19, 183-195.

Wu, T.S. and B.A. Boley (1966): Bounds in melting problems with arbitrary rates of liquid removal. SIAM J. Appl. Math. 14, 306-323.

Yagoda, H.P. and B.A. Boley (1970): Starting solutions for melting of a slab under plane or axisymmetric hot spots. Quart. J. Mech. Appl. Math. 23, 225-246.

J.A. Nitsche
Institut für Angewandte Mathematik
Albert-Ludwigs-Universität
Hermann-Herder-Str. 10
7800 Freiburg
Federal Republic of Germany