

ANTONIO FASANO

List of Scientific Publications

A - RESEARCH PAPERS

1. A. FASANO, Studio della distribuzione di temperatura in un involucro sferico omogeneo in moto traslatorio su un'orbita assegnata con condizioni termiche discontinue sul contorno, REND. IST. LOMB. ACCAD. SCI. LET. (A) 101 (1967), 65-74
2. A. FASANO, Sulla conduzione del calore in una sfera omogenea orbitante, soggetta a condizioni termiche superficiali discontinue, RIV. MAT. UNIV. PARMA (2) 8 (1967), 329-343
3. A. FASANO, Una dimostrazione della convergenza del metodo di Rothe per un problema di tipo parabolico, RIV. MAT. UNIV. PARMA (2) 9 (1968), 303-326
4. A. FASANO, Stime a priori per le soluzioni di un problema di tipo parabolico con condizioni al contorno non lineari., REND. IST. MAT. UNIV. TRIESTE 3 (1971), 1-12
5. A. FASANO, Sulla inversione di un classico problema di diffusione del calore. LE MATEMATICHE 26 (1971), 1-12
6. A. FASANO, Un esempio di controllo ottimale in un problema del tipo di Stefan., BOLL. UN. MAT. ITAL. (4) 4 (1971), 846-858
7. A. FASANO, M. PRIMICERIO, Su un problema unidimensionale di diffusione in un mezzo a contorno mobile con condizioni ai limiti non lineari., ANN. MAT. PURA APPL. (4) 93 (1972), 333-357
8. A. FASANO, M. PRIMICERIO, Il problema di Stefan con condizioni al contorno non lineari, ANN. SCUOLA NORM. SUP. PISA CL. SCI. (4) 26 (1972), 711-737
9. A. FASANO, J.R. CANNON, Boundary value multidimensional problems in fast chemical reactions, ARCH. RAT. MECH. ANAL. 53 (1973), 1-13
10. A. FASANO, M. PRIMICERIO, Convergence of Huber's method for heat conduction problems with change of phase, Z. ANGEW. MATH. MECH. 53 (1973), 341-348
11. C. BONACINA, G. COMINI, A. FASANO, M. PRIMICERIO, Numerical solution of phase-change problems, INT. J. HEAT MASS TRANSFER 16 (1973), 1825-1832
12. A. FASANO, M. PRIMICERIO, La diffusione del calore in uno strato di spessore variabile in presenza di scambi termici non lineari con l'ambiente, REND. SEM. MAT. UNIV. PADOVA 50 (1973), 269-330

13. A. FASANO, M. PRIMICERIO, F. FONTANELLA, An efficient method for solving free-boundary diffusion problems, *MECCANICA* 8 (1973), 223-235
14. A. FASANO, Alcune osservazioni su una classe di problemi a contorno libero per l'equazione del calore, *LE MATEMATICHE* 29 (1974), 1-15
15. C. BONACINA, G. COMINI, A. FASANO, M. PRIMICERIO, On the estimation of thermophysical properties in nonlinear heat-conduction problems, *INT. J. HEAT MASS TRANSFER* 17 (1974), 861-867
16. A. FASANO, M. PRIMICERIO, Dipendenza continua della temperatura dai coefficienti termici in problemi di conduzione non lineari, *BOLL UN. MAT. ITAL. IV/9* (1974), 93-103
17. A. FASANO, M. PRIMICERIO, Viscoplastic impact of a rod on a wall, *BOLL. U.M.I.* (4) 11 (1975), 531-553
18. A. FASANO, M. PRIMICERIO, One-phase and two-phase free boundary problems of general type for the heat equation, *REND. ACCAD. NAZ. LINCEI* (8) 57 (1975), 387-390
19. J.R. CANNON, A. FASANO, A nonlinear parabolic free boundary problem, *ANN. MAT. PURA APPL.* (4) 112 (1975), 119-148
20. A. FASANO, M. PRIMICERIO, A stability theorem for diffusion problems with sharply changing temperature-dependent coefficients, *QUART. APPL. MATH.* 33 (1975), 397-415
21. A. FASANO, O. VITTORI, Black spherules in the micron and submicron range. *Proc. Int. Colloquium Planetary Geol. 1975, GEOLOGICA ROMANA* 15 (1976), 329-335
22. A. FASANO, M. PRIMICERIO, S. KAMIN, Regularity of weak solutions of one-dimensional two-phase Stefan problems, *ANN. MAT. PURA APPL.* (4) 115 (1977), 341-348
23. A. FASANO, M. PRIMICERIO, General free-boundary problems for the heat equation, I, *J. MATH. ANAL. APPL.* 57 (1977), 694-723
24. A. FASANO, M. PRIMICERIO, General free-boundary problems for the heat equation, II, *J. MATH. ANAL. APPL.* 58 (1977), 202-231
25. A. FASANO, M. PRIMICERIO, General free-boundary problems for the heat equation, III, *J. MATH. ANAL. APPL.* 59 (1977), 1-14
26. A. FASANO, M. PRIMICERIO, Free boundary problems for nonlinear parabolic equations with nonlinear free boundary conditions, *J. MATH. ANAL. APPL.* 72 (1979), 247-273

27. A. FASANO, Free boundary problems for parabolic equations with Cauchy data on the free boundary. Proc. Sem. Free Boundary Problems, (E. Magenes editor) vol. II (1979), 237-247
28. A. FASANO, M. PRIMICERIO, Cauchy type free boundary problems for nonlinear parabolic equations, RIV. MAT. UNIV. PARMA (4) 5 (1979), 635-645
29. A. FASANO, M. PRIMICERIO, Liquid flow in partially saturated porous media, J. INST. MATH. APPL. 23 (1979), 503-517
30. BONACINA, G. COMINI, A. FASANO, M. PRIMICERIO, Temperature effects of thermophysical property variations in nonlinear conductive heat transfer, BULL. CALCUTTA MATH. SOC. 71 (1979), 301-308
31. A. FASANO, M. PRIMICERIO, Convexity of the free boundary in some classical parabolic equations, RIV. MAT. UNIV. PARMA (4) 5 (1979), 615-634
32. L. RUBINSTEIN, A. FASANO, M. PRIMICERIO, Remarks on the analyticity of the boundary for the one-dimensional Stefan problem, ANN. MAT. PURA APPL. (4) 125 (1980), 295-311
33. A. FASANO, M. PRIMICERIO, L. RUBINSTEIN, A model problem for heat conduction with a free boundary in a concentrated capacity, J. INST. MATH. APPL. 26 (1980), 327-347
34. A. FASANO, M. PRIMICERIO, New results on some classical free boundary problems, QUART. APPL. MATH. 38 (1981), 439-460
35. A. FASANO, L.T. VILLA, Some remarks on the curvature of the free boundary in a Stefan problem with appearance of a phase, BOLL. U.M.I. B 1 (1982), 743-752
36. A. FASANO, M. PRIMICERIO, A critical case for the solvability of Stefan-like problems, MATH. METH. APPL. SCI. 5 (1983), 84-96
37. A. FASANO, M. PRIMICERIO, Classical solutions of general two-phase parabolic free boundary problems in one dimension, in "Free boundary problems: Theory and applications", II, RES. NOTES MATH. n.79, Pitman, London (1983), 644-657
38. A. FASANO, J.R. CANNON, J.C. CAVENDISH, A free boundary problem related to the combustion of a solid, SIAM J. APPL. MATH. 45 (1985), 798-809
39. E. DI BENEDETTO, A. FASANO, M. PRIMICERIO, On a free boundary problem related to an irreversible process, CONTROL & CYBERNETICS 14 (1985), 195-219
40. A. FASANO, M. PRIMICERIO, Mushy regions with variable temperature in melting processes, BOLL. U. M. I. B 4 (1985), 601-626
41. A. FASANO, M. PRIMICERIO, Phase change with volumetric heat sources: Stefan's scheme vs. enthalpy formulation, BOLL. U.M.I. - FIS.MAT. (1985), 131-149

42. A. FASANO, R. RICCI, Penetration of solvents into glassy polymers, "Free Boundary Problems: Applications and Theory", III (Bossavit, Damlamian, Fremond eds.), PITMAN'S RES. NOTES MATH. 120 (1985), 132-139
43. A. FASANO, G. MEYER, M. PRIMICERIO, On a problem in the polymer industry: theoretical and numerical investigation, SIAM J. APPL. MATH. 17 (1986), 945-960
44. A. FASANO, M. PRIMICERIO, A parabolic-hyperbolic free boundary problem, SIAM J. MATH. ANAL. 17 (1986), 67-73
45. A. FASANO, M. PRIMICERIO, Heat and mass transfer in quasi-steady ground freezing processes, Proceedings First European Symposium on Mathematics in Industry, (M. Hazewinkel et al. ed.), REIDEL (1986), 31-56
46. A. FASANO, A combustion model with a free boundary, "Nonlinear Diffusion", Nonlinear Parabolic Equations: Qualitative Properties of Solutions, L. Boccardo - A. Tesei eds. (1987), Pitman Res. Notes Math. 149, 103-109
47. A. FASANO, On a mathematical model for phase change accounting for coexistence of phases, Free Boundary Problems Theory and Applications, (K. H. Hoffmann, J. Sprekels eds.), Pitman Res. Notes Math. 186 (1990), 694-702
48. A. FASANO, M. PRIMICERIO, A phase-change model with a zone of coexistence of phases, IMA J. APPL. MATH. 41 (1988), 31-46
49. A. FASANO, A mathematical model for continuous casting, Proc. Int. Conf. Theory and Appl. of Diff. Eqs., (A. R. Aftabizadeh ed.), (1988), 277-282
50. A. FASANO, M. PRIMICERIO, Phase change without sharp interfaces, in "Mathematical Models for Phase Change Problems", (J. F. Rodrigues ed.), ISNM 88, Birkhäuser Verlag, Basel (1989), 107-125
51. A. FASANO, M. PRIMICERIO, S. GROCHMAL, Su una classe di fenomeni diffusivi con scambio di materia o calore tra mezzi in moto relativo, ATTI SEM. MAT. Univ. Modena 37 (1989), 447-464
52. A. FASANO, M. PRIMICERIO, S.D HOWISON, J.R. OCKENDON, On the singularities of one - dimensional Stefan problems with supercooling, in "Mathematical Models for Phase Change Problems", (J. F. Rodrigues ed.), ISNM 88, Birkhäuser Verlag, Basel (1989), 215-226
53. A. FASANO, M. PRIMICERIO, E. FERRONI, Un modello microscopico per la degradazione di miscele acqua-carbone, Fluidodinamica multifase nell'impiantistica industriale, Trieste, (1990), 307-321
54. A. FASANO, M. PRIMICERIO, R. RICCI, Limiting behaviour of some problems in diffusive penetration, REND. MAT. (VII) 10 (1990), 39-57
55. A. FASANO, S. HOWISON, J. OCKENDON, M. PRIMICERIO, Some remarks on the regularization of supercooled one-phase Stefan problems in one dimension, QUART. APPL. MATH. 48 (1990), 153-168

56. A. FASANO, M. PRIMICERIO, Sul problema della degassazione e contaminazione di superficie in ambiente rarefatto, *Atti Accad. Pelor. Pericolanti* 68 (1990), 473-490
57. E. BERETTA, A. FASANO, A mathematical model for the dynamics of phytoplankton population, in "Differential Equations Models in Biology, Epidemiology and Ecology", S. Busenberg, M. Martelli eds., *Lect. Notes in Biomath.*, Springer-Verlag 92 (1991) 161-176
58. BELLENI-MORANTE, A. FASANO, M. PRIMICERIO, Outgassing and mass exchange between two surfaces, *Proc. 5th European Conf. Math. in Industry* (M. Heilio ed.), Teubner, (1991), 143-146
59. A. FASANO, M. PRIMICERIO, Modelling the rheology of coal-water slurries, in *Proceed. 4th Eur. Conf. Math. in Industry* (Hj. Wacker, W. Zulehner eds.) Teubner, Stuttgart, (1991), 269-274
60. A. FASANO, M. PRIMICERIO, E.V. RADKEVICH, Problemi' perechodnoi' zoni, *DOKL. AKAD. NAUK SSSR* 320 (1991), 562-566. Transitional zone problems, *Soviet Math. Dokl.* 44 (1992) 507-511
61. D. ANDREUCCI, A. FASANO, M. PRIMICERIO, On a mathematical model for the crystallization of polymers, in *Proceed. 4th European Conference Mathematics in Industry* (Hj. Wacker, W. Zulehner eds.), Teubner, Stuttgart, (1991), 3-16
62. D. ANDREUCCI, A. FASANO, M. PRIMICERIO, A mathematical model for non-isothermal crystallization, *PROC. R.I.M.S. (Kyoto)* 755 (1991), 112-120
63. A. FASANO, C. MANNI, M. PRIMICERIO, Modelling the dynamics of fluidizing agents in coal-water slurries, *Proc. Int. Symp. "Nonlinear Problems in Engineering and Science"*, Shutie Xiao, Xiang-Cheng Hu eds., Science Press (Beijing) (1991), 64-71
64. A. FASANO, M. PRIMICERIO, Blow-up and regularization for the Hele-Shaw problem, *Proc. Conference on Variational Problems Minneapolis* (A. Friedman and J. Spruck eds.), (1992)
65. E. BERETTA, A. FASANO, Y. HOSONO, Equilibrium of a phytoplankton population in a laboratory-controlled system, *SURVEYS MATH. IND.* 1 (1992), 283-336
66. A. BELLENI-MORANTE, A. FASANO, M. PRIMICERIO, Existence and uniqueness of the solution of a problem of outgassing and contamination, *Adv. Math. Sci. Appl.* 1 (1992) 195-206
67. D. ANDREUCCI, A. FASANO, M. PRIMICERIO, On the occurrence of singularities in axi - symmetrical problems of Hele-Shaw type, *Int. Series Num. Math.* 106 (1992) 23-38
68. A. FASANO, M. PRIMICERIO, G. BALDINI, Filtration and extraction in coffee preparation, *Proceedings 6th ECMI Conference* (F. Hodnett ed.) , Teubner (1992), 137 - 140

69. A. FASANO, M. PRIMICERIO, F. ROSSO, On quasi-steady axisymmetric laminar flows of Bingham type with stress-induced degradation , *Computing* 49 (1992), 213-237
70. A. FASANO, Z. GUAN, M. PRIMICERIO, I. RUBINSTEIN, Thawing in saturated porous media, *MECCANICA* 28 (1993) 103-109
71. J.I. DIAZ, A. FASANO, A. MEIRMANOV, On the disappearance of the mushy regions in multidimensional Stefan problems, in "Free Boundary Problems Involving Solids", J. Chadam, H. Rassmussen eds., Montreal, Pitman's Res. Notes in Math. 281 (1993), 124-129
72. E. COMPARINI, A. FASANO, The effect of temperature on the dynamics of a Phytoplankton population, *J. Nonlinear Analysis* (1993), 1355-1367
73. E. BERETTA, A. FASANO, Y. HOSONO, V.B. KOLMANOVSKII, The stability analysis of the phytoplankton steady states in a laboratory test tube, *Math. Meth. Appl. Sci.* 17 (1994), 551-575.
74. A. FASANO, M. PRIMICERIO, On mathematical models for nucleation and crystal growth processes, in *Boundary value problems for PDE's and applications*, (J. L. Lions, C. Baiocchi eds.), Masson, Paris (1993), 351-358.
75. E. DE ANGELIS, A. FASANO, M. PRIMICERIO, F. ROSSO, E. CARNIANI, D. ERCOLANI, Modeling sedimentation in CWS, in "Slurry handling and Pipeline Transport", C. Shook ed., Meth. Eng. Publications, London 1993, 399-414.
76. A. FASANO, M. PRIMICERIO, Mathematical models for filtration through porous media interacting with the flow. In "Nonlinear Mathematical Problems in Industry", H. Kawarada, N. Kenmochi, N. Yanagihara ed., *Gakuto Int. Series Math. Sci. Appl.*, 1 (1993), 61-85.
77. A. FASANO, M. PRIMICERIO, A. WATTS, On a filtration problem with flow-induced displacement of fine particles. In "Boundary Control and Boundary Variations" (7th IFIP Conf.), J.P. Zolesio ed., *Dekker Lect. Notes Pure Appl. Math.* 123 (1994), 205-232.
78. D. ANDREUCCI, A. FASANO, M. PAOLINI, M. PRIMICERIO, C. VERDI, Numerical simulation of polymer crystallization, *Math. Models & Meth. Appl. Sci.* 4 (1994), 135-145.
79. A. FASANO, A mathematical model for the dynamics of sediments in a pipeline, *Progress in Industrial Mathematics*, H. Neunzert ed. (7th ECMI Conference, 1994), Wiley & Teubner (1996), 241-249.
80. A. FASANO, M. PRIMICERIO, Flows through saturated mass exchanging porous media with high pressure gradients, in "Calculus of Variations, Applications and Computations", C. Bandle et al. eds. (1994) *Pitman Res. Notes Math.* 326, Longman (1995), 109-129.
81. A. FASANO, M. PRIMICERIO, On a class of travelling wave solutions to phase change problems with an order parameter, *Workshop on nonlinear analysis and applications* (N. Kenmochi, M. Niezgodka, eds.), Warsaw 1995, 113-123

82. D. ANDREUCCI, A. FASANO, R. GIANNI, M. PRIMICERIO, R. RICCI, Modelling nucleation in crystallization of polymers. *Free Boundary Problems: Theory and Applications* (Zakopane 1995), M. Niezgodka, P. Strzelecki eds., Pitman Res. Notes Math., Longman 363 (1996), 359-367.
83. E. BERETTA, A. FASANO, Mathematical models for drug administration by senescent red blood cells, in "*Diff. Eq. and Appl. to Biology and to Industry*", M. Martelli, K. Cooke, E. Cumberbatch, H. Thieme eds., World Scientific (1995), 23-29.
84. A. FASANO, The penetration of a wetting front through a porous medium accompanied by the dissolution of a substance, In *Mathematical Modelling of Flows through Porous Media*, A. Bourgeat et al eds., World Scientific (1995) 183-195.
85. A. FASANO, P. TANI, Penetration of a wetting front in a porous medium with flux dependent hydraulic parameters, In *Nonlinear Problems in Applied Mathematics* (K. Cooke et al. eds) SIAM (1995).
86. A. FASANO, M. PRIMICERIO, An analysis of phase transition models, *EJAM* 7 (1996) 1-12
87. D. ANDREUCCI, A. FASANO, M. PRIMICERIO, R. RICCI, Mathematical models in polymer crystallization, *Survey Math. Ind.* 6 (1996) 7-20.
88. D. ANDREUCCI, A. FASANO, R. RICCI, On the growth of a polymer layer around a catalytic particle: a free boundary problem, *NoDEA* Vol. 4, n. 4 (1997) 511-520
89. A. FARINA, A. FASANO, Flow characteristics of waxy crude oils in laboratory experimental loops. *Math. Comp. Modelling* 25 (1997) 75-86.
90. A. FASANO, D. ANDREUCCI, R. RICCI, Modello matematico di replica nel caso limite di distribuzione continua dei centri attivi. Simposio Montell "Meccanismi di accrescimento di poliolefine su catalizzatori di Ziegler-Natta", (Ferrara 1996) S. Mazzullo, G. Cecchin eds., Montell Polyolefins (1997), 154-174
91. A. FASANO, A. MIKELIC, M. PRIMICERIO, Homogenization of flows through porous media with permeable grains. *Adv. Math. Sci. Appl.* 8 (1998) 1-31.
92. A. FASANO, Some two-scale processes involving parabolic equations. *Free Boundary Problems, Theory and Applications*, I. Athanasopoulos, G. Makrakis, J. Rodrigues eds., CRC Press (1999) 39-50.
93. A. FASANO, M. PRIMICERIO, D. A. TARZIA, Similarity solutions in a class of thawing processes, *Math. Mod. Meth. Appl. Sci.* (1999) 1-10
94. A. FASANO, R. GIANNI, Phase change of a two-component liquid-liquid dispersion. *Nonlinear Analysis: Real World Appl.* 1 (2000) 435-448.
95. A. FASANO, A one-dimensional flow problem in porous media with hydrophile granules. *Math. Meth. Appl. Sci.* 22 (1999) 605-617.

96. A. FASANO, F. TALAMUCCI. A comprehensive mathematical model for a multi-species flow through ground coffee. *SIAM J. Math. Analysis* 31 (1999) 251-273.
97. A. FASANO, F. ROSSO. Analysis of the dynamics of liquid-liquid dispersions. *Progress in Industrial Mathematics (ECMI 98, Gothenburg)*, L. Arkeryd, J. Bergh, Ph. Brenner, R. Pettersson eds., 214-221 (Teubner, 1999).
98. A. FASANO, L. PEZZA. On a temperature-dependent Hele-Shaw flow in one dimension. *Rend. Mat. Acc. Lincei*, s.9, 12 (2001) 57-67.
99. A. FASANO, A. MIKELIC. On the filtration through porous media with partially soluble permeable grains. *NoDEA* 7 (2000), 141-156.
100. A. FASANO, A. MANCINI, Existence and uniqueness of a classical solution for a mathematical model describing the isobaric crystallization of a polymer. *Interfaces & Free Boundaries* 2 (2000) 1-19.
101. D. ANDREUCCI, A. FASANO, R. RICCI, Existence of solutions for a continuous multigrain model for polymerisation. *M3AS* 10 (2000) 1263-1276.
102. A. FASANO, Flows in porous media with liquid absorbing granules, in *Complex Flows in Industrial Processes*, A. FASANO ed., MSSET Birkhäuser, Chapt. 10 (2000) 307-332
103. A. FASANO, F. ROSSO. A new model for the dynamics of dispersions in a batch reactor. In "Lectures on Applied Mathematics", H.J. Burgartz, R.H.W. Hoppe, C. Zenger editors, Springer-Verlag (2000), 123-142.
104. A. BERTUZZI, A. FASANO, A. GANDOLFI. A mathematical model for the growth of tumour cords incorporating the dynamics of a nutrient. *Free Boundary Problems: Theory and Applications (II)*, N. Kenmochi ed., Gakuto Int. Ser. Math. Sci. Appl. 14, Gakkotosho (2000) 31-46.
105. A. FASANO, V. A. SOLONNIKOV. On one-dimensional unsaturated flow in a porous medium with hydrophile grains. *Functional Diff. Eqs.* 8 (2001) 195-224.
106. A. FASANO, V. A. SOLONNIKOV. Estimates of weighted Holder norms of the solutions to a parabolic boundary value problem in an initially degenerate domain. *Rend. Mat. Acc. Lincei* 13 (2002) 23-41.
107. A. FASANO. Mathematical models for polymerisation processes of Ziegler-Natta type. "Mathematical Modelling for Polymer Processing" (V. Capasso ed.), ECMI Series Mathematics in Industry 2, Springer-Verlag (2003) 3-28.
108. A. BERTUZZI, A. FASANO, A. GANDOLFI, D. MARANGI. Cell kinetics in tumour cords studied by a model with variable cell cycle length. *Math. Biosci.* 177-8 (2002) 103-125.
109. A. FARINA, A. FASANO. Mathematical models for metal matrix composites manufacturing. *MECCANICA* 35 (2000) 473-496.

110. A. FASANO, F. ROSSO. Dynamics of dispersions with multiple breakage and volume scattering. Computational Methods in Multiphase Flow, H.Power, C.A.Brebbia editors, Advances in Fluid Mechanics, WIT press (2001) 207-216.
111. A. BERTUZZI, A. FASANO, A. GANDOLFI. Mathematical modelling of tumour cords. Journal of Medical Informatics and Medicine 2, IP23-IP31 (2001)
112. A. BERTUZZI, A. FASANO, A. GANDOLFI. A free boundary problem with unilateral constraints describing the evolution of a tumour cord under the influence of a cell killing agent. SIAM J. Math. Analysis Vol. 36, No. 3 (2004) 882-915.
113. A. FASANO, A. MIKELIC. The 3-D flow of a liquid through a porous medium with absorbing and swelling granules. Interfaces & Free Boundaries 4 (2002) 239-261.
114. A. FARINA, A. FASANO, On the analysis of a mathematical model for metal matrix composites manufacturing. M3AS 13 (2003) 843-874.
115. A. FASANO, A. MANCINI, R. RICCI. Solid core revisited. "Free Boundary Problems" (P. Colli, C. Verdi, A. Visintin, editors), Int. Series of Numerical Mathematics, Birkhäuser 147 (2003) 139-149.
116. A. BERTUZZI, A. D'ONOFRIO, A. FASANO, A. GANDOLFI. Regression and regrowth of tumour cords following single-dose anticancer treatment. Bulletin of Mathematical Biology 65, (2003) 903-931
117. A. FASANO, V. SOLONNIKOV. Unsaturated incompressible flows in adsorbing porous media. Math. Meth. Appl. Sci. 26 (2003) 1391-1419.
118. A. FASANO, A. MANCINI, M. PRIMICERIO. Equilibrium of two populations subjected to chemotaxis. Mathematical Models & Methods in Applied Sciences Vol. 14, n. 4 (2004) 503-533.
119. I. BORSI, A. FARINA, A. FASANO. On the infiltration of rainwater through the soil with runoff of the excess water. Nonlinear Analysis 5 (2004) 763-800.
120. A. FASANO, M. PRIMICERIO. Heat and mass transport in non-isothermal partially saturated oil-wax solutions. In New Trends in Mathematical Physics, Fergola, Capone, Tenneriello editors, World Scientific (2006) 33-44.
121. A. FASANO, M. PRIMICERIO. Temperature driven mass transport in concentrated saturated solutions. Progress in Nonlinear Differential Equations and Their Application, Vol. 61, 91-108 (2005)
122. A. BERTUZZI, A., FASANO, A., FILIDORO, L., GANDOLFI, A., SINISGALLI, A., "Dynamics of tumour cords following changes in oxygen availability: a model including a delayed exit from quiescence", Mathematical and Computer Modelling, vol. 41, n. 10 (2005) 1119-1135

123. A. FASANO, F. ROSSO. Dynamics of droplets in an agitated dispersion with multiple breakage. Part I: formulation of the model and physical consistency. *Math Meth. Appl. Sci.* Vol. 28, n. 6 (2004) 631-659
124. A. FASANO, F. ROSSO. Dynamics of droplets in an agitated dispersion with multiple breakage. Part II: uniqueness and global existence. *Math. Meth. Appl. Sci.* Vol. 28, n. 9 (2005) 1061-1088
125. S. CORRERA, A. FASANO, L. FUSI, D. MERINO-GARCIA. Calculating deposit formation in the pipelining of waxy crude oils. *Meccanica* 42 (2007) 149-165
126. F. ROSSO, A. FASANO. Multiple fragmentation of liquid droplets in agitated dispersions. *Far East Journal of Applied Mathematics* Vol. 16 (2004) 325-344
127. A. FASANO, D. GIORNI. On a one-dimensional problem related to bioremediation of polluted soils. *Adv. Math: Sci. Appl.* 14 (2004) 443-455.
128. A. FASANO, A. MANCINI, F. ROSSO. A “close-up” view of breakage and scattering kernels for the dynamics of liquid dispersions: theory and numerical simulations. *Applied and Industrial Mathematics in Italy, Proc. SIMAI Conference* (2004), M. Primicerio, R. Spigler, V. Valente editors World Scientific, Series Adv. Math. Appl. Sci. 69 (2005) 324-335.
129. A. BERTUZZI, A. FASANO, A. GANDOLFI, A mathematical model for tumour cords incorporating the flow of interstitial fluid. *M3AS* 15 (2005) 1735-1777.
130. A. BERTUZZI, A. FASANO, A. GANDOLFI, C. SINISGALLI. Interstitial pressure and extracellular fluid motion in tumour cords. *Math. Biosci. Engineering* 2 (2005) 445-460.
131. S. CORRERA, A. FASANO, L. FUSI, M. PRIMICERIO, F. ROSSO. Wax diffusivity under given thermal gradient: a mathematical model. *ZAMM* 87 (2007) 24-36.
132. A. FASANO, K. KANNAN, A. MANCINI, K.R. RAJAGOPAL. Modelling Ziegler-Natta polymerization in high pressure reactors. In “Material substructures in complex bodies: from atomic level to continuum” (G. Capriz, P. M. Mariano editors). Elsevier (2007) 206-237.
133. A. FASANO, A. MANCINI. A mathematical model for a class of frying processes. *Int. J. Comp. Math. Appl.* 53 (2007) 395-412.
134. A. BERTUZZI, A. FASANO, A. GANDOLFI, C. SINISGALLI. Cell resensitization after delivery of a cycle-specific anticancer drug and effect of dose splitting: learning from tumour cords. *J. Theor. Biol.* 244 (2007) 388-399
135. S. CORRERA, A. FASANO, L. FUSI, M. PRIMICERIO. Modelling wax diffusion in crude oils: the cold finger device. *J. Appl. Math. Modelling* 31 (2007) 2286-2298.
136. A. BERTUZZI, A. FASANO, A. GANDOLFI, C. SINISGALLI. The transport of specific monoclonal antibodies. *Math Everywhere*, G. Aletti, M. Burger, A. Micheletti, D. Morale editors. Springer (2007) 151-164.

137. A. FASANO, M. PRIMICERIO. Wax deposition in crude oils: a new approach. *Rend. Mat. Accad. Lincei IX*, 16 (2005) 251-263.
138. A. FASANO, A. MANCINI. Modelling frying of a non-deformable specimen by immersion in edible oil. *Computers & Mathematics with Applications*. 55 (2008) 149-161.
139. A. FASANO, A. MANCINI, F. ROSSO. Implementation of a fragmentation-coagulation scattering model for the dynamics of stirred liquid-liquid dispersion. *Physica D: Nonlinear phenomena* 222 (2006) 141-158.
140. A. FARINA, A. FASANO, L. FUSI, K.R. RAJAGOPAL. Modelling materials with a stretching threshold. *Mathematical Models and Methods in the Applied Science (M3AS)*, vol. 17, issue 11, 1799-1846 (2007).
141. A. FARINA, A. FASANO, A. MIKELIC. On the equations governing the flow of mechanically incompressible, but thermally expansible, viscous fluids. *Math. Models Methods Appl. Sci.*, Vol. 18 (2008) 813-858.
142. A. FASANO, F. ROSSO. Modelling break-up process of a liquid drop in shear flow. *J. Appl. Math. Modelling* 33 (2009) 315-328
143. A. FASANO, A. MANCINI. Modelling the onset of vaporization in frying processes with no mechanical deformation. *J. Food Process Engineering* 33 (2010) 48-65, DOI: 10.1111/j.1745-4530.2008.00278.x
144. A. BERTUZZI, A. FASANO, A. GANDOLFI, C. SINISGALLI. Reoxygenation and split-dose response to radiation in tumours with idealized Krogh-like vascular geometry. *Bull. Math. Biol.* 70(4) (2008) 992-1012.
145. F. CLARELLI, A. FASANO, R. NATALINI. Mathematics and monuments conservation: a model for marble sulfation. *SIAM J. Appl. Math.* 69 (2008) 149-168.
146. A. BERTUZZI, A. FASANO, A. GANDOLFI, C. SINISGALLI. Tumour cords and their response to anticancer agents. *Selected Topics in Cancer Modelling*, N. Bellomo, M. Chaplain, E. De Angelis editors, MSSET Birkhäuser, Boston 2008, 183-206.
147. A. BERTUZZI, A. FASANO, A. GANDOLFI, C. SINISGALLI. ATP production and necrosis formation in a tumour spheroid model. *Mathematical Modelling of Natural Phenomena* 2 (2007) 30-46.
148. L. FAIENZA, A. FASANO, M. PRIMICERIO. Gelification of hydrocarbons. A model problem. In "Some topics in Industrial and Applied Mathematics". R. Jeltsch, Ta-Tsien Li, Ian H Sloan, editors. *Series Contemporary App. Math.* 8, World Scientific (2007) 120-133.
149. A. FASANO, L. FUSI, J.R. OCKENDON, M. PRIMICERIO. Gelification and mass transport in a static non-isothermal waxy solution. *Eur. J. App. Math.*, Vol. 20, issue 1 (2009), 93-122.

150. L. BIANCHINI, A. FASANO. A model combining acid-mediated tumour invasion and nutrient dynamics. *Nonlinear Analysis Real World Applications* 10 (2009) 1955-1975.
151. A. FASANO, M.A. HERRERO, M. ROCHA RODRIGO. Slow and fast invasion waves in a model of acid-mediated tumour growth. *Math. Biosci.* 220 (2009) 45-56
152. I. BORSI, A. FARINA, A. FASANO, K.R. RAJAGOPAL. Modelling the combined chemical and mechanical action for blood clotting. *Proceedings of FBP Conference (Chiba, 2007) Nonlinear Phenomena with Energy Dissipation: Mathematical Analysis, Modeling Simulation*, N.Kenmochi, M.Mimura, P.Colli, A.Damlamian, J.Sprekels, editors, *Gakkotosho, Mathematical Sciences* 29 (2008) 53-72.
153. A. FASANO, D. HOEMBERG, L. PANIZZI. A mathematical model for gas carburizing in steel. *M3AS* 19 (2009) (DOI No: [10.1142/S0218202509004054](https://doi.org/10.1142/S0218202509004054)) 2101-2126.
154. Th. CLOPEAU, A. FARINA, A. FASANO. A. MIKELIC. Asymptotic equations for the terminal phase of glass fiber drawing and their analysis. *Nonlinear Analysis, RWA* 11 (2010) 4533-4545
155. A. FASANO, A. MANCINI. A phenomenon of waiting time in phase change problems driven by radiative heat transfer. *Math. Meth. Appl. Sci.* 32 (2009) 1105-1117.
156. I. BORSI, A. FARINA, A. FASANO, M. PRIMICERIO. Modelling bioremediation of polluted soils in unsaturated conditions and its effects on the soil hydraulic properties. *Applications Math.* 53 (2008) 409-432.
157. A. FASANO, D. HOEMBERG, D. NAUMOV. A mathematical model for laser induced thermotherapy. *Appl. Math. Modelling* 34 (2010) 3831-3840.
158. I. BORSI, A. FASANO. A general model for bioremediation processes of contaminated soils. *J. Adv. Eng. Sci. Appl. Math.* 1 (2009), 33--42.
159. A. BERTUZZI, A. FASANO, A. GANDOLFI, C. SINISGALLI. Necrotic core in EMT6/Ro tumour spheroids: is it caused by an ATP deficit? *J. Theor. Biol.* 262 (2010) 142-150, DOI [10.1016/j.jtbi.2009.09.024](https://doi.org/10.1016/j.jtbi.2009.09.024)
160. A. FARINA, A. FASANO. A. MIKELIC. Non-Isothermal flow molten glass: mathematical challenges and industrial questions. In *Mathematical Models for the Manufacturing of Glass. CIME Lecture Notes in Mathematics* (A. Fasano editor), Springer (2010), 173-224, DOI : [10.1007/978-3-642-15967-1](https://doi.org/10.1007/978-3-642-15967-1)
161. L. BUCCIANTINI, A. FARINA, A. FASANO. Flows in porous media with erosion of the solid matrix. *Networks & Heterogeneous Media* 5 (2010) 63-95.
162. A. FASANO, M. PRIMICERIO, A. TESI. A mathematical model for spaghetti cooking with free boundaries. *Appl. Math. J.: Networks and Heterogeneous Media* 6 (2011) 37-60.

163. A. FARINA, A. FASANO, L. FUSI, K.R. RAJAGOPAL. On the dynamics of an elastic-rigid material. *AMSA* 20 (2010) 193-217.
164. A. FASANO, A. MANCINI, M. PRIMICERIO, B. ZALTZMAN. A phenomenon of waiting time in phase change problems driven by radiative heat transfer. *Math. Meth. Appl. Sci.* 32 (2009) 1105-1117.
165. D'ONOFRIO, A. FASANO, B. MONECHI. A generalization of Gompertz law compatible with the Gillenberg-Webb model for tumour growth. *Math. Biosci.* 230 (2011) 45-54.
166. A. BERTUZZI, C. BRUNI, A. FASANO, F. PAPA, C. SINISGALLI. Response of tumour spheroids to radiation: modelling and parameter estimation. *Bull. Math. Biol.* 72 (2010) 1069-91 .
167. A. FASANO, M. GABRIELLI, A. GANDOLFI. The energy balance in stationary multicellular spheroids. *Far East Journal Math. Sci.* 39 (2010) 105-128.
168. A. FARINA, A. FASANO, L. FUSI, K.R. RAJAGOPAL. The one-dimensional flow of a fluid with limited strain rate. *Quart. Appl. Math.* 69 (2011)549-568
169. A. FASANO, M.A. HERRERO, J.M. LOPEZ, E. MEDINA. On the dynamics of the growth plate in primary ossification. *J. Theor. Biol.* 265 (2010) 543-553.
170. A. FARINA, A. FASANO, Incompressible flows through a solid matrix with mass exchange: the double scale approach vs. mixture theory. *M3AS* 21 (2011) 57-88.
171. I. BORSI, A. FASANO, Modelling wastewater flow in hollow fibre filters. *Proc. Comsol Conference CD 2009 Edition*, (2009) ISBN: 978-0-9825697-0-2
172. I. BORSI, A. FARINA, A. FASANO, On the influence of geometrical factors and of slip condition on the filtration through hollow fibres. *ZAMP* 62 (2011) 681-706 (DOI) *10.1007/s00033-011-0143-2*.
173. A. FASANO, M. MIMURA, M. PRIMICERIO. Modelling a slow smoldering combustion process. *Math. Meth. Appl. Sci.* 33 (2010)1211-1220 DOI: 10.1002/mma.1301.
174. A. FASANO, M. GABRIELLI, A. GANDOLFI. Investigating the steady state of multicellular spheroids by revisiting the two-fluid model. *Math. Biosci. Eng.* 8 (2011) 239-252
175. A. FASANO A. FARINA, Erosion in porous media caused by the flow of an evolving mixture: an upscaling approach. *AMSA* 20 (2011) 371-398.
176. I. BORSI, A. FARINA, A. FASANO, M. MURATORI. A double scale model for the bioremediation of a soil sample under gravity driven flow. *CAIM* 1 (2010) 99-109.
177. I. BORSI, A. FASANO, L. LENZINI. Computing the lifetime of granular activated carbon filters by means of travelling wave solutions. *Applied Mathematical Modeling* 35 (2011) 1868-1880. DOI 10.1016/j.apm.2010.10.016
178. A. FARINA, J.BODIN, Th. CLOPEAU, A. FASANO, L. MEACCI, A. MIKELIC. Isothermal water flows in low porosity porous media in presence of vapour-liquid phase change. *Nonlinear Analysis: Real World Applications.* 15 (2014) 306-325.
doi:10.1016/j.nonrwa.2011.11.021.
179. A. FARINA, A. FASANO. Modelling hollow fibres high flux dialyzers. *Discrete and Continuous Dynamical Systems - Series B (DCDS-B)* 17 (2012) 1903-1937
180. A. FARINA, A. FASANO. Designing irrigation pipes. *Journal of Industrial Mathematics* (2011) 1-8. doi:10.1186/2190-5983-1-8
181. G. BUSONI, A. FASANO, A. MANCINI, M. PRIMICERIO. Modelling social dynamics of a structured population. *Rend. Lincei Mat. Appl.* 22 (2011) 1-21.
182. I. BORSI, C. CARETTI, A. FASANO, M. HEIJNEN, C. LUBELLO. An experimental and modeling study of the hydraulic efficiency of hollow fibers membrane waste water treatment. *Desalinization* 302 (2012) 80-86

183. I. BORSI, A. FARINA, A. FASANO. The effect of osmotic pressure on the flow of solutions through semi-permeable hollow fibers. *Appl. Math. Mod.* 37 (2013), 5814-5827.
184. M. CERMINARA, A. FASANO. Modelling the dynamics of a geothermal reservoir fed by gravity driven flow through over standing saturated rocks. *J. Volcanology Geothermal Research* 233–234 n.1 (2012) 37–54
185. A. FARINA, A. FASANO, J. MIZERSKI. A new model for blood flow in fenestrated capillaries with application to ultrafiltration in kidney glomeruli. *A.M.S.A.* 23 (2013) 319-337.
186. A. FASANO, J. PAVLOVA, A. SEQUEIRA. A synthetic model for blood coagulation including blood slip at the vessel wall. *Clinical Hemorheology & Microcirculation* 54 (2013) 1-14.
187. A. BERTUZZI, A. FASANO, A. GANDOLFI, C. SINISGALLI. Modelling the evolution of a tumoural multicellular spheroid as a two-fluid Bingham-like system. *M3AS* 23, (2013) 2561–2602
188. I. Borsi, G. Busoni, A. Fasano, M. Primicerio. Social mobility and redistribution policy. *Rend. Lincei Mat. Appl.* 25 (2014), 147–164
189. C. Ronco, F. Garzotto, J. C. Kim, A. Fasano, A. Farina, I. Borsi. Modeling blood filtration in hollow fibers dialyzers coupled with patient's body dynamics. *Rend. Lincei Mat. Appl.* 27 (2016) 369-412.
190. A. Fasano, L. Anfuso, I. Borsi. Mathematics helps assessing the risks of esophageal thermal lesions in pulmonary veins isolation by means of cryoablation. *Rend. Lincei Mat. Appl.* 25 (2014), 301–307
191. I. Borsi, A. Fasano, M. Primicerio, T. Hillen. A non-local model for cancer stem cells and the tumor growth paradox. *Mathematical Medicine & Biology* 34 (2017) 59-75 doi:10.1093/imammb/dqv037.
192. J. Pavlova, A. Fasano, J. Janela, A. Sequeira. Numerical validation of a synthetic cell-based model of blood coagulation. *Journal of Theoretical Biology* 380 (2015) 367-379.
193. J. Pavlova, A. Fasano, A. Sequeira. Numerical simulations of a reduced model for blood coagulation. *ZAMP* 67 (2016) #28. DOI: 10.1007/s00033-015-0610-2
194. L. Fusi, A. Farina, A. Fasano. Short and Long Wave Peristaltic Flow: Modeling and Mathematical Analysis. *International Journal of Applied Mechanics* 7 (2015) DOI: 10.1142/S1758825115400141
195. A. Farina, A. Fasano. Steady Flow Through a Slender Tapered Vessel with a Partially Permeable Wall and Closed End. *International Journal of Nonlinear Mechanics* 81 (2016) 147-153.
196. A. Fasano. Higher incidence of esophageal lesions after atrial fibrillation ablation related to the use of esophageal temperature probes (letter to the Editor). *Heart Rhythm* Vol. 12, n.9 (2015) e116.
197. A. Fasano. Sensitivity and accuracy of Sensitherm/Esotherm esophageal temperature probe. *Europace* 2016 ;18 (3): 468.
198. A. Fasano, A. Mancini, M. Primicerio. Tumours with cancer stem cells: a PDE model. *Math. Biosci.* 272 (2016) 76–80.
199. A. Fasano, L. Anfuso, S. Bozzi, C. Pandozi. Safety and necessity of thermal esophageal probes during radiofrequency ablation for the treatment of atrial fibrillation. *J. Atrial Fibrillation* 2016;9(1):11-18.
200. A. Farina, A. Fasano. Incompressible flows through slender oscillating vessels provided with distributed valves. *AMSA* 25 (2016) 33-42.
201. A. Farina, A. Fasano, L. Fusi, A. Ceretani, F. Rosso. Modeling peristaltic flow in vessels equipped with valves: implications for vasomotion in the batwing venules. *Int. J. Engineering Science* 107 (2016) 1–12

202. A. Fasano, G. Guarnieri, A. Farina. A mathematical model for the evolution of solute concentrations in a hemodialysis filter. *Int. J. Biomath.* 2018
<https://doi.org/10.1142/S1793524518500158>
203. A. Fasano, L. Anfuso, G. Arena, C. Pandozi. Cryo-ablation for pulmonary veins isolation: importance of esophageal temperature monitoring. *J Atrial Fibrillation* 2017;9(6):1-7.
204. A. Fasano. Importance of time response in esophageal temperature monitoring. *Heart Rhythm* 14(1), 2017, Page e2
205. A. Farina, A. Fasano, A. Caggiati. Modeling Vasomotion. *Rev. Vascular Medicine* 8 (2017) 1–4.
206. A. Fasano. Reliability of luminal esophageal temperature monitoring during pulmonary veins isolation. *Europace* 2017, doi:10.1093/europace/euw403.
207. A. Fasano. Monitoring esophageal temperature during catheter ablation. *Jafib* 10 (2), 2017.
208. A. Fasano, L. Anfuso. Improving safety of esophageal thermal probes. *EP Europace*, Volume 18, Issue suppl_1, 1 June 2016, Pages i91,
https://doi.org/10.1093/europace/18.suppl_1.i91a
209. L. Anfuso, M. Corsi, A. Fasano. Esophageal thermal probes: how fast should they be? *Mathew Journal of Cardiology*, 3(1): 2018.
210. M. Cardini, A. Farina, A. Fasano, A. Caggiati. Blood Flow in Venules: a Mathematical Model Including Valves Inertia. *Veins and Lymphatics* 2019;8(3) DOI [10.4081/vl.2019.7946](https://doi.org/10.4081/vl.2019.7946)
211. A. Fasano. Andreas Vesalius and his *Fabrica*: was he influenced by Leonardo's anatomical drawings? In “Leonardo: il Corpo dell’Uomo”, M.Brunori, Editor. *Atti dei Convegni Lincei* 330, Bardi Edizioni (2019), p. 117-132.
212. M. Ascolese, A. Farina, A. Fasano. The Fåhræus-Lindqvist Effect in Small Blood Vessels: How Does It Help the Heart? *J. Biological Physics*, **45**, 379–394(2019).
213. A. Gandolfi, S. De Franciscis, A. d’Onofrio, A. Fasano, C. Sinisgalli. Angiogenesis and vessel co-option in a mathematical model of diffusive tumor growth. *J. Theor. Biol.* 512 (2021) doi.org/10.1016/j.jtbi.2020.110526
214. A. Farina, A. Fasano, M. Primicerio, F. Rosso. Modeling of a Geothermal System with Fluid Extraction and Re-injection. In *Applied Science - Special Issue "Recent Advances in Geothermal Energy Exploration"*. *Appl. Sci.* 2020, 10(21), 7561; <https://doi.org/10.3390/app10217561>
215. A. Fasano, L. Anfuso. Esophageal Temperature Evolution During High Power Short Duration Ablation: Numerical Simulations and Clinical Suggestions. *Journal of Cardiovascular Medicine and Cardiology* 2020 (2): 125-128.
216. A. Fasano. Monitoring esophageal temperature by Sensitherm probes is a valid tool to prevent esophageal lesions occurrence. *Europace*. DOI: [10.1093/europace/euaa351](https://doi.org/10.1093/europace/euaa351)
217. A. Farina, A. Fasano, F. Rosso. A Continuum Mechanics Model for the Fåhræus - Lindqvist Effect. *J. Biological Physics*, 47, Sept. 2021, 253-270.
218. A. Farina, A. Fasano, F. Rosso. Mathematical modeling of some aspects of microcirculation. *MDPI Symmetry*, Special Issue "Mathematical Modeling of Biological Systems: Geometry, Symmetry and Conservation Laws", F. Papa, C. Sinisgalli Editors. *Symmetry* 2021, 13, 1020. ; <https://doi.org/10.3390/sym13061020> - 06 Jun 2021
219. A. Farina, A. Fasano, F. Rosso. Modeling vasomotion in arterioles. *J. Theor. Biol.* 2022 Jul 7;544:111124.

220. A. Farina, A. Fasano, F. Rosso, Y. Shekari. Modeling Hemodialysis with Albumin Retention. 2022, *Applicable Analysis* 101 (2022) 4095-4112
<https://doi.org/10.1080/00036811.2022.2078714>
221. A. Fasano, C. Sinisgalli. Travelling waves and free boundaries arising in tumor angiogenesis. *Rendiconti Lincei. Matematica e Applicazioni, Atti Accad. Naz. Lincei Cl. Sci. Fis. Mat. Natur.* 34 (2023), no. 1, pp. 175–194
222. A. Farina, A. Fasano, F. Rosso. A Mathematical Model for the Fåhræus Effect. *J. Theor. Biol.* Volume 558, 7 February 2023, art. 111355
223. A. Fasano. Heat penetration in biological tissues during high power short duration radiofrequency ablation. *Arch. Cardiology* 2023;1(1): 1-2.
224. L. Anfuso, A. Fasano. Fast increase of luminal esophageal temperature during High Power Short Duration radiofrequency ablation. *Austin Journal of Surgery*, Vol. 11, Issue 1 (2024).
225. A. Farina, A. Fasano, F. Rosso. Modeling thermal effects of pulsating currents in human tissues: how to prevent necrosis. *Biophysica* 2024, 4(4), 477-487; <https://doi.org/10.3390/biophysica4040031>
226. A. Farina, A. Fasano, F. Rosso. Peculiar phenomena occurring in small blood vessels: models, interpretation and importance for life. *Rend. Lincei Mat. Appl.* 35 (2024), 397–445 DOI 10.4171/RLM/1046.
227. A. Farina, A. Fasano, M. Grimaldi, F. Rosso. Heat delivery accompanying pulsed field ablation. *J. Theor. Biol.* Vol. 610, 7 August 2025, 112145
228. A. d’Onofrio, A. Fasano, F. Papa, C. Sinisgalli. Modeling the effects of an antiangiogenic monotherapy. In preparation

NOTE . Original research papers presented at conferences: 50, 52, 53, 57-59, 61-64, 71, 75-77, 79-84, 90, 104, 110, 115, 120, 121, 128, 148, 171, 211.

Survey papers containing original results: 92, 102, 107, 218.

B - INVITED TALKS AND REVIEW PAPERS - BOOK CHAPTERS
--

1. A. FASANO, Problemi a contorno libero di tipo generale per l'equazione del calore: casi speciali. Quaderni GNFM-CNR, V. Boffi ed. (1975), 13-17.
2. A. FASANO, Study of a one-dimensional mathematical scheme for sorption of swelling solvents in polymers. *Workshop on Applied Nonlinear Functional Analysis. Berlin*, 1981, Gorenflo-Hoffmann eds. (1982), 43-72
3. A. FASANO, M. PRIMICERIO, Free boundary problems in change of phase processes. *Proc. U.S.A.-Italy joint workshop on Heat Transfer & Combustion*, R.Lazzaretti, S.N. Murthy editors., Pisa II,5 (1982), 1-14
4. A. FASANO, M. PRIMICERIO, Freezing in porous media: a review of mathematical models, *Proc. of German-Italian Symposium "Applications of Mathematics in Technology"*, V. Boffi - H. Neunzert editors., Teubner (1984), 288-311
5. A. FASANO, Stefan problems and generalizations (rapporteur's introduction), *Free Boundary Problems Theory and Applications*, (K. H. Hoffmann, J. Sprekels eds.), Pitman Res. Notes Math. 186 (1990), 677-680
6. A. FASANO, Modeling the solidification of polymers: an example of an ECMI cooperation, *Proc. ICIAM 91*, Invited talk, Washington (R. E. O' Malley ed.) 1991 (1991), 99-118
7. A. FASANO, Esperienze di collaborazione con industrie su programmi a lungo termine, XIV Convegno UMI, invited talk, Padova 1995, Boll. UMI (7) 11-A (1997) 1-40
8. A. FASANO, Sul ruolo storico delle stime di Ciliberto per le equazioni di tipo parabolico, *Atti Convegno in onore di C. Ciliberto*, T. Bruno et al. eds. (Napoli 1995), La Citta' del Sole (Napoli, 1997), 99-112.
9. A. FASANO, Phase transition with supercooling. Boll. UMI (8) 1-B (1998) 49-69.
10. A. FASANO. Nonlinear processes of injection of liquids through porous materials. *Rend. Sem. Mat. Fis. Milano* 1997, 67 (2000) 151-167.
11. A. FASANO, Some mathematical models for the flow of waxy crude oils. *Transport Theory and Statistical Physics* 29 (2000) 187-197.
12. A. FASANO, Pipelining of liquid fuels with peculiar rheological properties, 2nd Alan Tayler Memorial Lecture, *Progress in Industrial Mathematics (ECMI 98, Gothenburg)*, L. Arkeryd, J. Bergh, Ph. Brenner, R. Pettersson eds., 28-45 (Teubner, 1999).
13. A. FASANO, A. MANCINI, A mathematical model for the analysis of polymers P-V-T diagrams, in *Applied and Industrial Mathematics, Venice 2*, 1998, R. Spigler editor, 75-88, Kluwer (2000).

14. A. FASANO, F. TALAMUCCI, A mathematical model of filtration through a composite porous medium. *Progress in Industrial Mathematics (ECMI 98, Gothenburg)*, L. Arkeryd, J. Bergh, Ph. Brenner, R. Pettersson eds., 222-230 (Teubner, 1999).
15. A. FASANO, A. MANCINI, S. MAZZULLO, Isobaric crystallization of polypropylene, in *Complex Flows in Industrial Processes*, A. FASANO ed., MSSET Birkhäuser, Chapt. 5 (2000) 149-189.
16. A. FASANO, M. PETRACCO, F. TALAMUCCI, The espresso coffee problem, in *Complex Flows in Industrial Processes*, A. FASANO ed., MSSET Birkhäuser, Chapt. 8 (2000) 241-280.
17. A. FASANO. Mathematical models in polymer processing. *MECCANICA* J. 35 (2000) 163-198.
18. A. FASANO, F. ROSSO. Recent new models for multiphase flows: coal-water suspensions and oil-water dispersions. 7th Conf. "Multiphase Flows in Industrial Plants" (ANIMP, DIEM, AIDIC Bologna 2000), 34-43.
19. A. FASANO. The "volume scattering" effect in the dynamics of liquid-liquid dispersions. *SIAM News*, 34, n. 3 (2001).
20. A. FASANO, F. ROSSO. Recent results on the dynamics of liquid dispersions. *Progress in Industrial Mathematics at ECMI 2000*, A.M. Anile, V. Capasso, A. Greco editors, Springer, Mathematics in Industry 1 (2002), 80-84
21. A. BERTUZZI, A. FASANO, A. GANDOLFI. Mathematical modelling of tumour cords. *Journal of Medical Informatics and Technologies*, Vol. 2 (2001), 24-31.
22. A. FASANO, The dynamics of two-phase liquid dispersions: necessity of a new approach. *Milan Journal of Mathematics*, 70 (2002) 245-264.
23. A. BERTUZZI, A. FASANO, A. GANDOLFI. Modelling the dynamics of tumour cords under a cell-killing agent. *Proceedings 2nd MIT Conference on Computational Fluid and Solid Mechanics*, (K.J. Bathe ed.), Vol. 2, Elsevier, 2003, 1631-1633.
24. A. FASANO, The continuous multigrain model for the production of polypropylene and polyethylene. Indian Institute of Technology (2003).
25. A. FASANO. Modelling the evolution of tumour cords (with. A. Bertuzzi, A. Gandolfi). Indian Institute of Technology (2003).
26. A. FASANO. On the penetration of rainwater into the ground. Indian Institute of Technology (2003).
27. A. FASANO, L. FUSI, S. CORRERA. Mathematical models for waxy crude oils. *MECCANICA* 39 (2004) 441-482.
28. A. BERTUZZI, A. D'ONOFRIO, A. FASANO, A. GANDOLFI. "Modelling cell populations with spatial structure: steady state and treatment-induced evolution of tumour

- cords", Discrete and Continuous Dynamical Systems (B), 4, Special Issue on Mathematical Models in Cancer (M.H. Horn, G. Webb editors) (2004) 161-186.
29. A. FASANO. Qualche considerazione sulla matematica industriale in Italia. Boll. UMI, 8 A., (2005) 83-106.
 30. A. BERTUZZI, A. FASANO, A. GANDOLFI. Mathematical modelling of tumour growth and treatment. In *Integration of Complex Systems in Biomedicine* (A. Quarteroni, L. Formaggia, A. Veneziani editors), Springer-Verlag Italia (2006) 71-108.
 31. A. FASANO. Il matematico in laboratorio: una marcia in più per lo sviluppo tecnologico. Mathesis Subalpina, Conferenze e Seminari 2005-2006, Kim Williams Books (2006) 77-92.
 32. A. FASANO, R. NATALINI. Lost beauties of the Acropolis: what mathematics can say. SIAM News (July/August 2006).
 33. S. CORRERA, D. MERINO-GARCIA, A. FASANO, L. FUSI, Formation and growth of wax deposit in the pipelining of crude oils, *Progress in Industrial Mathematics at ECMI 2006* (Bonilla, Moscoso, Platero, Vega Eds), Springer-Verlag (2008), 307-311.
 34. A. FARINA, A.FASANO, L. FUSI, K.R. RAJAGOPAL. Dynamics of materials with a deformability threshold. In *Applied and Industrial Mathematics in Italy II* (V. Cutello, G. Fotia, L. Puccio eds.), Adv. Math. Appl. Sci 75, World Sci. (2007) 327-338.
 35. S. CORRERA, D. MERINO-GARCIA, A. FASANO, L. FUSI. Wax diffusion and deposition in the pipelining of waxy crude oils. In *Applied and Industrial Mathematics in Italy II* (G. Fotia, L. Puccio eds.), World Sci. (2007)
 36. I.BORSI, A. FARINA, A. FASANO, M. PRIMICERIO. Biomass growth in unsaturated porous media: hydraulic properties changes. In *Applied and Industrial Mathematics in Italy II* (V. Cutello, G. Fotia, L. Puccio eds.), Adv. Math. Appl. Sci 75, World Sci. (2007) 196-207.
 37. A.FASANO, A. MANCINI. Math from the pan: fantastic voyage through a French fry. SIAM News (May 2008).
 38. A. FARINA, A. FASANO, L. FUSI, K.R. RAJAGOPAL. One-dimensional motion of a material with a strain threshold. *Le Matematiche* 62 (2007) 199-218.
 39. A.BERTUZZI, A.FASANO, A. GANDOLFI. Tumour cords: Mathematical models and perspectives. Fourth JSIAM-SIMAI Seminar on Industrial and Applied Mathematics, H. Fujita, M. Nakamura editors, *Gakuto International Series Math. Sci Appl.* 28 (2008) 1-10.
 40. S. CORRERA, A.FASANO, L. FUSI, M. MARGARONE. A survey on the problem of wax deposition in non-isothermal waxy crude oils. *Math. Model. Nat. Phenom.* 6 (2010) 157-183.
 41. M. MARGARONE, R. BAGATIN, C. BUSTO, P. D'OLIMPIO , L. FUSI , L. FAIENZA , A. FASANO, M PRIMICERIO. A wax crystallization model from DSC experiments, (poster).
 42. A. FARINA, A. FASANO. Modelling complex flows in porous media by means of upscaling procedures. *Rend. Ist. Mat. Univ. Trieste* 42 (2010) 65-102.
 43. A. FASANO, R. SANTOS, A. SEQUEIRA. Blood coagulation: a puzzle for biologists, a maze for mathematicians. In *MODELLING PHYSIOLOGICAL FLOWS* - D. Ambrosi, A. Quarteroni, G. Rozza (Editors), Springer Italia Chapt. 3, (2011) 44-77, DOI 10.1007/978-88-470-1935-53

44. A. FASANO, A. FARINA. From ultra-filtration to fields irrigation: the reign of porous ducts. Proceedings Conference "Evolution Equations and Materials with Memory"(2010), S. Carillo, Editor. Casa Editrice Università La Sapienza, Collana Convegni 17 (2011) 51-70.
45. A. FASANO, A. GANDOLFI. The steady state of multicellular tumour spheroids: a modelling challenge. In: *Mathematical Methods and Models in Biomedicine*. Ledzewicz U., Schaettler H., Friedman A., Kashdan E. editors. Lecture Notes on Mathematical Modelling in the Life Sciences (2013) Springer, 179-202,
46. A. FASANO. Glucose metabolism in multicellular spheroids, ATP production and effects of acidity. In *New Challenges for Cancer Systems Biomedicine*, A. d'Onofrio, Z. Agur, P. Cerrai and A. Gandolfi editors, Springer (2012) 173-190.
47. A. FASANO, M.A. HERRERO, J.M. LOPEZ, E. MEDINA. A mathematical model for the growth of elongated bones. CAIM 1, n.2, (2010) 153-164.
48. A. BERTUZZI, A. FASANO, C. SINISGALLI. Conservation laws in cancer modeling. In "Mathematical Oncology" (editors: A. d'Onofrio, A. Gandolfi), Birkhäuser, Boston, 2014.
49. T. Bodnár, A. Fasano, A. Sequeira. Mathematical Models for Blood Coagulation. In *Fluid-Structure Interaction and Biomedical Applications*, T. Bodnár, G.P. Galdi, S. Nečasová, Editors, Chapt. 7. Birkhäuser, Adv. Math. Fluid Mech. 2014
50. Fasano. L. Anfuso. Improving safety of esophageal thermal probes. Cardiosim, Nice 2016.
51. A. Fasano, L. Anfuso, C. Pandozi. Thermal field in cryoablation procedures for pulmonary veins isolation: importance of esophageal temperature monitoring. XVII International Symposium on Progress in Clinical Pacing - Rome, 2016
52. A. Fasano. New studies offer increased safety during AF ablation by monitoring esophageal temperature. Poster at Atrial Fibrillation and Heart Failure. Bologna 2017.
53. A. Fasano. Mathematics and Blood. In "I modelli matematici strumenti di conoscenza e di innovazione tecnologica", Accademia Nazionale dei Lincei (2017).
54. A. Fasano. Andreas Vesalius and the birth of modern medicine. Ph (online), 2 - 2019.
55. A. Fasano, C. Sinisgalli. A mathematical model for tumor angiogenesis with a travelling wave structure. M.L. Schuverdt, N.L. Kudraszow, R.P. Vignau, M.D. Sánchez, Editors. (MACI) Vol. 8 (2021), pages 15-18.
56. A. Fasano. La matematica a supporto dell'ablazione cardiaca. In "La forza nascosta della matematica", V. Ancona Editor. Accademia Toscana di Scienze e Lettere (Colombaria), n. 12, Polistampa (2023). p. 35-64

NOTE: B30, B43, B49 are BOOK CHAPTERS.

NOTE: papers listed under A # 92, 102, 107 are also surveys, but contain original results.

B1 - INTERNAL REPORTS

1. A. Fasano. On the so-called antenna effect. FIAB internal report 2019/1.
2. A. Fasano, R. Cioni. Temperatura in filamenti percorsi da corrente (progettazione Cauteri). FIAB internal report 2018/1.
3. A. Fasano, R. Cioni. Considerazioni teoriche sulla misura della bioimpedenza. FIAB internal report 2019/2.
4. A. Fasano. Prevenzione delle lesioni esofagee nelle procedure di ablazione per il trattamento della fibrillazione atriale: risultati recenti. FIAB internal report 2019/3.

5. A. Fasano, L. Anfuso. A critical review of the literature on esophageal temperature monitoring during catheter ablation procedures. FIAB internal report 2020/2
6. A. Fasano, M. Corsi. Essential features of systems monitoring the esophageal luminal temperature during cardiac ablation procedures. FIAB internal report 2020/1
7. A. Fasano. Stationary temperature in a needle partially inserted in a partially heated body. FIAB internal report 2020/3
8. A. Fasano. Analysis of the literature concerning esophageal thermal monitoring during cardiac ablation (report for FDA). FIAB internal report 2021/1
9. A. Fasano. Are the sensors of the FIAB Esotherm Multi esophageal probe rightly spaced? FIAB internal report 2021/2
10. A. Fasano. About the FIAB Esotherm Multi esophageal probe interelectrode distance. FIAB internal report 2022/1
11. A. Fasano. Rationale about devices lifetime. FIAB internal report 2022/2
12. A. Fasano. About Sensitherm alarm thresholds. FIAB internal report 2022/3
13. A. Fasano, M. Corsi. Esophageal temperature monitoring: State of the art. FIAB internal report 2022/4
14. A. Fasano. Area of the lobed cross section of tubes for oxygen therapy. FIAB internal report 2022/5
15. A. Fasano, P. Martino. State of the art in electrosurgery. FIAB internal report 2022/6
16. A. Fasano. On the concept of confidence interval in statistical previsions. FIAB internal report 2022/7
17. A. Fasano. Heat penetration in biological tissues during high power short duration radiofrequency ablation. FIAB internal report 2023/1.
18. A. Fasano. Considerations on the interaction of a steel ball with a plane adhesive gel surface. FIAB internal report 2023/2.
19. A. Fasano. Highlights on the literature about esophageal thermal monitoring. FIAB internal report 2023/3.
20. A. Fasano. Temperature raise during transesophageal cardiac stimulation. FIAB internal report 2024/1.
21. A. Fasano. Yearly updating of the adverse events occurrence: convergence speed of the averaging method. FIAB internal report 2024/2.
22. A. Fasano. Thermal consequences of Pulsed Field Ablation. FIAB internal report 2024/3.
23. A. Fasano. Additional considerations on the temperature of cauteries. FIAB internal report 2024/4.
24. Computing the length of a cautery filament. FIAB internal report 2024/5.
25. Heat exchange between blood and solid tissues during PFA procedures. FIAB internal report 2024/6.
26. Survival after defibrillation of ventricular arrhythmia. FIAB internal report 2025/1.
27. Side effects of Pulsed Field Ablation for the cure of atrial fibrillation. FIAB internal report 2025/2.
- 28.

C - BOOKS

1. A. FASANO, M. PRIMICERIO (editors), Free boundary problems: theory and applications, PITMAN'S RES. MATH. NOTES , Vol.78 & 79, Pitman, London (1983)
2. A. FASANO, M. PRIMICERIO (editors), CIME Course on "Nonlinear Problems in Diffusion", SPRINGER LECT. NOTES MATH. 1224 (1986)
3. A. FASANO, V. CAPASSO (editors), CIME Course on "Mathematical Modelling of Industrial Processes", SPRINGER LECT. NOTES MATH. 1521 (1990).
4. A. FASANO, M. PRIMICERIO (editors), Proc. VII ECMI Conference (Montecatini 1993), B.G. Teubner Stuttgart 1994.
5. A. FASANO (editor), CIME Course on "Filtration through porous media with industrial applications", SPRINGER LECT. NOTES MATH. 1734 (2000)
6. A. FASANO (editor). Complex flows in industrial processes. Birkhäuser, MSSET (2000)
7. A. FASANO (editor). Mathematical Models in the Manufacturing of Glass. CIME Lecture Notes in Mathematics, 2010, Springer (2011). ISBN 9783642159664
8. A. FASANO, A. SEQUEIRA. Hemomath: The Mathematics of Blood. Springer Series Modeling Simulations and Applications, Vol. 18, A. Quarteroni Editor (2017).
9. A. D'ONOFRIO, A. FASANO, F. PAPA, C. SINISGALLI (Editors). Problems in Mathematical Biophysics. Springer, to appear.

D - LECTURE NOTES

1. A. FASANO, Las Zonas Pastosas en el Problema de Stefan, CUAD. IST. MAT. "BEPPPO LEVI" 13 (1986)
2. A. FASANO, Free Boundary Problems and their Applications, Lecture Notes, SASIAM, Bari (1989)
3. A. FASANO, Some free boundary problems with industrial applications, 29^e Session Seminaire de Mathematiques Superieures, M.Delfour ed., Montreal NATO-ASI Series C: Math. Phys. Sci. 380 (1992) 113-142
4. A. FASANO, Some non-standard one-dimensional filtration problems. Bull. Fac. Ed. Chiba Univ. 44 (1996) 5-29.
5. A. FASANO, Filtration problems in various industrial processes, in "Filtration through porous media and industrial applications", A. FASANO ed., Springer Lect. Notes Math. 1734 (2000)
6. A. FASANO. Mathematical modelling in polymer science. Summer Course in Industrial Mathematics, Lisbon, 1999.
7. A. FASANO. Mathematical models of some diffusive processes with free boundaries. MAT (Rosario, Argentina 2006) and e-Lecture Notes SIMAI, 1 (2008)
8. A. FASANO. Parabolic Free Boundary Problems in Industrial and Biological Applications. SIMAI e-Lecture Notes ISSN1970-4429, 9 (2011) ISBN-A: 10.978.88905708/89

E - TEXTBOOKS

1. A. FASANO, V. DE RIENZO, A. MESSINA, Corso di Meccanica Razionale per il Biennio di Ingegneria, Laterza, Bari, I ed. 1978, II ed. 1982, III ed. 1986, IV ed. 1989, V ed. 1994, VI ed. 1998
2. A. FASANO, S. MARMI, Meccanica Analitica con elementi di Meccanica Statistica e dei Continui, Bollati-Boringhieri, Torino, 1994.
3. A. FASANO, S. MARMI, Meccanica Analitica (nuova edizione). Bollati-Boringhieri, Torino, 2002
4. A. FASANO, S. MARMI, Analytical Mechanics, Oxford University Press (2006). Second (revised) edition 2013.

PAPERS CLASSIFICATION BY SUBJECT (if not differently specified numbers refer to the list A)

1. Heat and/or mass transfer (no phase change)

1, 2, 51, 223 + 2B1

2. Parabolic equations (initial-boundary value problems)

4, 7, 12, 16, 20, 92, 106, 164 (general theory) 2B, 2C

3. Stefan problem and phase-change

(see also: Inverse problems; Numerical methods; Food Industry)

6, 8, 10, 11, 13, 15, 20, 26, 30, 35, 86, 93, 155 + 1C, 2D, 3D, 7D

22, 32 (regularity)

33 (with concentrated capacity)

36, 52, 55 (with supercooling) + 9B

39 (irreversible)

40, 41, 48, 71 (mushy regions) + 3B, 1D

94 (freezing of dispersions)

133, 138, 143 + 37B (frying)

153 (carburizing of steel)

178, 184, 214 (geothermal reservoirs)

4. Numerical methods for parabolic problems

3, 10, 11, 13

5. Inverse problems, control

5, 6

6. Other free boundary problems

(see also Fluid dynamics, Polymers, Porous media, Appl. to Medicine)

9, 38, 46, 54, 174 (chemical reactions + combustions), 200 (vasomotion)

14, 18, 23, 24, 25, 34, 37 (general) + 1B, 5B

27, 28 (with Cauchy data)

92 (two-scale)

17 (viscoplastic impact)

120, 121, 131, 135, 137, 148, 149 (wax deposition in crude oils)

135, 168 (elastic materials with thresholds in constitutive equations) + 34B, 38B

163 (elastic-rigid materials) 169 (bone growth)

7. Astronomy

1, 2 (heat transfer in satellites)
21 (micrometeorites)
56, 58, 66 (outgassing)

8. Porous media

(see also **Composites, Food Industry, Filters**)

29, 85 + 26B, 42B, 3C, 5C, 4D, 5D
45, 70 (ground freezing, thawing), 179 (liquid-vapour)+ 4B
95, 102, 105, 113, 117 (diapers)
127, 156, 158, 176 + 36B (bioremediation)
119 (rain infiltration in soils)
164, 169 (flows with mass exchange) 161, 176 (erosion)
171, 172, 177, 182 (water filtering) + 42B, 44B
178, 184, 214 (geothermal reservoirs)

9. Composites

109, 114, 116, 122 +10B, 14B

10. Fluid dynamics

53, 59, 63, 75, 79 (Coal Water Slurries) + 12B, 18B, 6C
69 (Bingham)
64, 67, 98 (Hele-Shaw)
154, 160 (glass fibers manufacturing)
180, + 44B (porous ducts)
194 peristalsis
195 tapered partially porous tubes
200, 201, 205, 210, 219 vasomotion

11. Oil industry – Geothermal energy

89, 120, 121, 125, 131, 135, 148, (Waxy Crude Oils) + 11B, 12B, 27B, 33B, 35B, 40B, 41B
178, 184 (geothermal reservoirs)

12. Polymers

42, 43 (swelling of glassy polymer) + 2B
61, 62, 74, 78, 81, 82, 87, 100 (polymer crystallization) + 6B, 13B, 15B, 17B, 6C, 6D
88, 90, 101, 107, 115, 132 (polymerisation) + 17B, 24B, 6C, 6D

13. Dispersions

97, 103, 110, 123, 124, 128 +19B, 20B, 22B

14. Population dynamics, Farmacokinetics, Chemotaxis

57, 65, 72, 73, 83, 118, 181, 188

15. Applications to Medicine

Tumour growth: 104, 108, 111, 112, 116, 129, 130, 134, 136, 144, 146, 147, 150, 151, 157, 159, 165, 166, 167, 174, 187, 191, 198, 213 + 21B, 23B, 25B, 28B, 30B, 39B, 45B, 46B, 48B

Tumor angiogenesis: 213 + 55B

Blood clotting: 152, 186, 192, 193, 221 + 42B, 53B

Bones growth: 169, 47B

Dialyzers: 179, 189, 202, 220 + 53B

Kidneys: 185, 218 + 53B

Pulmonary Veins Isolation (atrial fibrillation thermal treatments): 190, 198, 197, 199, 203, 206, 207, 208, 209, 215, 216, 223, 224 + 50B, 51B, 52B, 1B1, 4B1

Pulmonary Veins Isolation (atrial fibrillation treatment via PFA) 227

Blood circulation: 185, 200, 201, 205, 210, 212, 217, 218, 219, 222, 226 + 53B

Currents in biological tissues: 225

Bio-impedance: 3B1

16. Food Industry.

76, 77, 80, 84, 91, 96 (coffee) + 16B

133, 138, 143 (frying) + 37B

17. Industrial Mathematics (general)

29B, 31B, 3C, 4C, 5C, 6C,

18. Filters

171, 172, 175, 177, 183

19. Marble degradation

145 + 32B

20. History of Medicine

211 + 54B