Curriculum of Augusto Visintin (as of August 2017)

Born in Milan (Italy) in 1952 — Resident in Trento (Italy) – Italian nationality

Positions
July 1977 – May 1987: researcher at the Istituto di Analisi Numerica of Italian C.N.R., in Pavia

Dec. 1981 – June 1983 (one leave from Italian C.N.R.): researcher of the S.F.B. 123 of German D.F.G., in Heidelberg.

May 1987 – present: full professor of mathematical analysis at the University of Trento.

Memberships
1975 – present: member of the Unione Matematica Italiana

1980 – present: member of the G.N.A.F.A. of Italian C.N.R. and then of the G.N.A.M.P.A. of the Italian Istituto di Alta Matematica

1996 – present: member of the International Society for the Interaction of Mechanics and Mathematics

1997 – present: corresponding member of the Istituto Lombardo di Scienze e Lettere

2000 – present: member of the European Mathematical Society.

Boards
1999 – 2000: member of the scientific council of the Istituto di Analisi Globale Applicata of C.N.R., in Florence

2001 – present: member of the Executive Committee of I.S.I.M.M. (International Society for the Interaction of Mechanics and Mathematics)

2013 – 2016: president of ISIMM

2017 – present: vice-president of ISIMM.

Editorial Boards
1992 – present: journal "Advances in Mathematical Sciences and Applications"

1993 – present: book series "Gakuto Monographs in Mathematics", with the Japanese publisher Gakkotosho

2000 – present: journal "Bollettino dell'Unione Matematica Italiana".

2014 – present: journal "Interfaces and Free Boundaries".

Main Research Projects and Grants
1989–96: local coordinator of the project "Evolution equations and mathematical-physical applications", and then of the project "Nonlinear problems in analysis and in applications" (both with national coordinator by A. Fasano) of the M.I.U.R. (Italian Ministry for University and Research)

1998–99: national coordinator of the P.R.I.N. project "Mathematical analysis of models of phase transitions and related problems" of Italian M.I.U.R.

2000–01: national coordinator of the P.R.I.N. project "Free boundary problems" of Italian M.I.U.R.

2002–03: national coordinator of the P.R.I.N. project "Free boundary problems in applied sciences" of Italian M.I.U.R.

2004–05: national coordinator of the P.R.I.N. project project "Mathematical modelling and analysis of free boundary problems" of Italian M.I.U.R.

2006–07: national coordinator of the P.R.I.N. project "Free boundary problems, phase transitions and models of hysteresis" of Italian M.I.U.R.

2008–09 (extended up to 2012): national coordinator of the P.R.I.N. project "Phase transitions, hysteresis and multiscaling" of Italian M.I.U.R.

2013–15 participant of the P.R.I.N. project "Calculus of Variations" of Italian M.I.U.R.

2016–present participant of the P.R.I.N. project "Calculus of Variations" of Italian M.I.U.R..

Main Invited Adresses (since 2010)
"Multiscale-Problems" Amsterdam, Sept. 2010

"Analysis and Numerics of Partial Differential Equations" Nov. 2011

"Trends in Mathematical Analysis " Milano, March 2012
"Advanced Computational Electromagnetics" Trento, June 2013
"Waves and Stability in Continuous Media" Levico, June 2013
"Diffuse Interface Models" Levico, Sept. 2013
"MURPHYS-HSFS-2014" Berlin, 2014
"Theory and applications of partial differential equations" Berlin, Dec. 2015
"Reconsideration of the method of estimates ..." Kyoto, Oct 2014
"Special Materials in Complex Systems" Roma, may 2015
"Theory and applications of partial differential equations" Berlin, Dec 2015
"IEEE Conference Advances in Magnetics" Bormio, March 2016
"16th GAMM Seminar on Microstructure" Dortmund, Jan. 2017

Main Conferences Organized (since 2010)

"Hysteresis Modelling and Micromagnetics" Levico Terme, maggio 2011
"Variational Models and Method of Evolution" Levico Terme, settembre 2012
"Symposium on Trends in Applications of Mathematics to Mechanics 2014" Poitiers, settembre 2014
"Symposium on Trends in Applications of Mathematics to Mechanics 2016" (workshop INdAM-ISIMM) Roma, settembre 2016

Main Research Interests

Modelling of physical phenomena via nonlinear partial differential equations, and their analysis:
1. Modelling and analysis of phase transitions.
2. Modelling and analysis of hysteresis phenomena, in particular in ferromagnetism.
3. Modelling of homogenization phenomena and analysis of multi-scale models.
4. Analysis of nonlinear partial differential equations and related variational inequalities.

Teaching activity

Courses of basic analysis and of mathematical methods for engineering students
Courses on Functional Analysis, on P.D.E.s, Fourier Analysis and on Calculus of Variations for mathematics students.

Publications (as of August 2017)

Monographs

Differential models of hysteresis. Applied Mathematical Sciences, vol. 111. Springer, Berlin (1994)
Models of phase transitions. Progress in Nonlinear Differential Equations and Applications, vol. 28. Birkhäuser, Boston (1996)

Parts of books

Introduction to Stefan-type problems. In: Handbook of Differential Equations: Evolutionary Differential Equations vol. IV (C. Dafermos and M. Pokorny, eds.) North-Holland, Amsterdam (2008), chap. 8, pp. 377–484
Mathematical models of hysteresis. In: The Science of Hysteresis (G. Bertotti, I. Mayergoyz, eds.) Elsevier (2006), chap. 1, pp. 1–123

Edited books and special issues

Applications of mathematics to mechanics. Proceedings of the XIXth Symposium on Trends on Applications of Mathematics to Mechanics. Poitiers, September 2014. (A. Miranville, U. Stefanelli, L. Truskinovsky, A. Visintin, eds.) Discrete Contin. Dyn. Syst. Ser. S 10 (2017), 1–160
Proceedings of the Eighth International Symposium of Hysteresis Modeling and Micromagnetics, Levico, May 2010. (G. Bertotti, C. Serpico, A. Visintin, C. Visone, eds.) Physica B 407 (2012), 1307 – 1454
Proceedings of Symposium on Trends in Applications of Mathematics to Mechanics. Levico (Italy), September 2008. (P. Colli, I. Müller, A. Visintin, eds.) Contin. Mech. Thermodyn. **21** (2009) n. 2

Proceedings of the Sixth International Symposium of Hysteresis Modeling and Micromagnetics, Naples, June 2007. (G. Bertotti, C. Serpico, A. Visintin, C. Visone, eds.) Physica B 403 (2008), 1–508

Free Boundary Problems. Theory and Applications. (P. Colli, C. Verdi, A. Visintin, eds.), Birkhäuser, Basel (2004)

Curvature Flows and Related Topics. (A. Damlamian, J. Spruck and A. Visintin, eds.) Gakkotosho, Tokyo (1995)

Phase Transitions and Hysteresis (A. Visintin, ed.) Proceedings of a C.I.M.E. course, Montecatini 1993. Lecture Notes in Mathematics, vol. 1584. Springer, Berlin (1994)

Motion by Mean Curvature and Related Topics. (G. Buttazzo and A. Visintin, eds.) De Gruyter, Berlin (1994)

Models of Hysteresis. (A. Visintin, ed.) Pitman Res. Notes in Math., vol. 286. Longman, Harlow (1993)

Articles

154. *Structural compactness and stability of pseudo-monotone flows.* (arXiv:1706.02176)

153. *Evolutionary Γ-convergence of weak type.* (arXiv:1706.02172)

152. *On the structural properties of nonlinear flows.* In: "Solvability, Regularity, Optimal Control of Boundary Value Problems for PDEs" Springer INdAM Series (in press)

151. *On Fitzpatrick's theory and stability of flows.* Rend. Lincei Mat. Appl. 27 (2016) 1–30

150. *On the variational representation of monotone operators.* Discrete Contin. Dyn. Syst. Ser. S 10 (2017) 909–918

149. (with A.K. Nandakumaran) *Variational approach to homogenization of doubly-nonlinear flow in a periodic structure.* Nonlinear Analysis Series A, TMA 120 (2015) 14–29

148. *Weak structural stability of pseudo-monotone equations.* Discrete Contin. Dyn. Syst. Ser. A 35 (2015), 2763–2796

147. *P.D.E.s with hysteresis 30 years later.* Discrete Contin. Dyn. Syst. Ser. S 8 (2015), 793–816

146. *Ten issues about hysteresis.* Acta Applicandae Mathematicae 132 (2014), 635–647

145. *An extension of the Fitzpatrick theory.* Commun. Pure Appl. Anal. 13 (2014), 2039–2058

144. *Variational formulation of phase transitions with glass formation.* Boll. Un. Mat. Ital. VI (2013), 75–112

143. *Scale-transformations and homogenization of maximal monotone relations, with applications.* Asymptotic Analysis 82 (2013), 233–270

142. *Ohm-Hall conduction in hysteresis-free ferromagnetic processes.* Discrete Contin. Dyn. Syst. Ser. B 18 (2013), 551–563

141. *Structural stability of rate-independent nonpotential flows.* Discrete Contin. Dyn. Syst. Ser. S 6 (2013), 257–275

140. *Variational formulation and structural stability of monotone equations.* Calc. Var. Partial Differential Equations 47 (2013), 273–317

139. *On the homogenization of visco-elastic processes.* IMA J Appl. Math. 77 (2012), 869–886

138. *On the structural stability of monotone flows.* Boll. Un. Mat. Ital. IV (2011), 471–479

137. *Structural stability of doubly nonlinear flows.* Boll. Un. Mat. Ital. IV (2011), 363–391

136. *Homogenization of processes in nonlinear visco-elastic composites.* Ann. Scuola Norm. Sup. Pisa Cl. Sci. (5) X (2011), 611–644

135. *Rheological models vs. homogenization.* G.A.M.M.–Mitt. 34 (2011), 113–117

134. *Homogenization of a parabolic model of ferromagnetism.* J. Differential Equations 250 (2011), 1521–1552

133. *Scale-transformations in the homogenization of nonlinear magnetic processes.* Archive Rat. Mech. Anal. 198 (2010) 569–611

132. *Scale-transformations of maximal monotone relations in view of homogenization.* Boll. Un. Mat. Ital. (9) III (2010), 591–601

131. *Phase transitions and glass formation.* S.I.A.M. J. Math. Anal. 41 (2009), 1725–1756

130. *Scale-integration and scale-disintegration in nonlinear homogenization.* Calc. Var. Partial Differential Equations, 36 (2009), 565–590

129. (with U. Stefanelli) *Some nonlinear evolution problems in mixed form.* Boll. Un. Mat. Ital. IV (2009), 303–320

128. *Homogenization of some models of hysteresis.* Physica B 403 (2008) 245–249

127. *Extension of the Brezis-Ekeland-Nayroles principle to monotone operators.* Adv. Math. Sci. Appl. 18 (2008), 633–650

126. *Homogenization of the nonlinear Maxwell model of viscoelasticity and of the Prandtl-Reuss model of elastoplasticity.* Royal Soc. Edinburgh Proc. A 138 (2008), 1363–1401

125. *Homogenization of nonlinear visco-elastic composites.* J. Math. Pures Appl. 89 (2008), 477–504

124. *Electromagnetic processes in doubly-nonlinear composites.* Communications in P.D.E.s 33 (2008), 808–841

123. *Discontinuous hysteresis.* Oberwolfach Rep., 4 (2007), 613-616

122. *Homogenization of a doubly-nonlinear Stefan-type problem.* S.I.A.M. J. Math. Anal. 39 (2007), 987–1017

121. *Two-scale div-curl lemma.* Ann. Scuola Norm. Sup. Pisa Cl. Sci. (5) VI (2007), 1–31

120. *Two-scale convergence of some integral functionals.* Calc. Var. Partial Differential Equations 29 (2007), 239–265

119. *Two-scale convergence of first-order operators.* Z. Anal. Anwendungen 26 (2007), 133–164

118. *Discontinuous hysteresis and P.D.E.s.* In: Variational Problems in Materials Sciences (G. Dal Maso, ed) Birkhäuser, Basel (2006), 149–159

117. *Homogenization of the nonlinear Kelvin-Voigt model of visco-elasticity and of the Prager model of plasticity.* Continuum Mech. Thermodyn. 18 (2006), 223–252

116. *Homogenization of doubly-nonlinear equations.* Rend. Lincei Mat. Appl. 17 (2006) 211–222

115. *Towards a two-scale calculus.* ESAIM Control Optim. Calc. Var. 12 (2006), 371–397

114. *Quasilinear parabolic P.D.E.s with discontinuous hysteresis.* Ann. Matem. Pura Appl. 185 (2006), 487–519

113. *On homogenization of elasto-plasticity.* Journal of Physics. Conference Series, Vol. XII (2005), 222–234

112. *The Preisach model and partial differential equations.* In: Preisach Memorial Book (A. Ivanyi, ed.), Akademiai Kiado, Budapest (2005), 119–129

111. *Quasilinear first-order P.D.E.s with hysteresis.* J. Math. Anal. and Appl. 312 (2005), 401–419

110. *Maxwell's equations coupled with vector hysteresis.* In: Trends in Applications of Mathematics to Mechanics (Y. Wand, K. Hutter, eds.), Shaker, Aachen (2005), 569–578

109. *Maxwell's equations with vector hysteresis.* Archive Rat. Mech. Anal. 175 (2005), 1–38

108. (with F. Bagagiolo) *Porous media filtration with hysteresis.* Adv. Math. Sci. Appl., 14 (2004), 379–403

107. *Some properties of two-scale convergence.* Rend. Acc. Naz. Lincei, XV (2004), 93–107

106. *Quasilinear hyperbolic equations with hysteresis.* Rend. Acc. Naz. Lincei, XV (2004), 235–247

105. *About models of ferromagnetic hysteresis.* Cubo, 5 (2003), 17–25

104. *Quasilinear P.D.E.s with memory operators.* In: Evolution Equations: Applications to Physics, Industry, Life Sciences, Economics. (M. Iannelli, G. Lumer, eds.) Birkhäuser (2003), 415–423

103. *On hysteresis in elasto-plasticity and in ferromagnetism.* Int. J. Non-linear Mechanics, 37 (2002), 1283–1298

102. *Quasi-linear hyperbolic equations with hysteresis.* Ann. Inst. H. Poincaré. Analyse non linéaire, 19 (2002), 451–476

101. *Forward–backward parabolic equations and hysteresis.* Calc. Var. Partial Differential Equations, 15 (2002), 115–132

100. *Vector Preisach model and Maxwell's equations.* Physica B, 306 (2001), 21–25

99. *Hyperbolic equations with hysteresis.* C. R. Acad. Sc. Paris, 332 (2001), Série I, 315–320

98. *A new approach to evolution.* C. R. Acad. Sc. Paris, 332 (2001), Série I, 233–238

97. *Models of phase-relaxation.* Differential and Integral Equations, 14 (2001), 1469–1486

96. *Vector ferromagnetic hysteresis and Maxwell's equations.* J. Mater. Process. Manuf. Sci., 9 (2000), 64–69

95. *Ferromagnetism and hysteresis operators.* Rend. Istit. Lomb., A134 (2000). 23–30

94. *On some models of ferromagnetism.* In: Free boundary problems, theory and applications, I (N. Kenmochi, ed.), Gakkotosho (2000), 411–428

93. *Transizioni di fase ed isteresi.* Boll. Un. Mat. Ital., Serie 8, I-B (2000), 31–77

92. *P.D.E.s with hysteresis operators.* Proceedings of Equadiff 99 (B. Fiedler, K. Groeger, J. Sprekels, eds.), World Scientic, Singapore (2000), 369–382

91. (with F. Bagagiolo) *Hysteresis in filtration through porous media.* Zeitschr. Analysis und ihre Anw., 19 (2000), 977–997

90. *A Weiss-type model of ferromagnetism.* Physica B, 275 (2000), 87–91

89. *Models of nucleation and growth.* In: Free boundary problems, theory and application (I. Athanasopoulos, G. Makrakis, J.F. Rodrigues, eds.) Chapman and Hall/CRC, Boca Raton (1999), 287–298

88. *Nucleation and growth.* In: Variations of domains and free boundary problems in solid mechanics (P. Argoul, M. Fremond, Q.S. Nguyen, eds.), Kluwer, Dordrecht (1998), 121–127

87. *Introduction to the models of phase transitions.* Boll. Un. Mat. Ital., Serie VIII, I-B (1998), 1–47

86. *Nucleation and mean curvature flow.* Communications in P.D.E.s, 23 (1998), 17–35

85. *Six talks on hysteresis.* In: Proceedings of a Summer School held in Banff in 1995. AMS. CRM Proceedings and Lecture Notes, vol. 13 (1998), 207–236

84. *Mathematical models of hysteresis. A survey.* Nonlinear Partial Differential Equations. College de France. Vol. XIII (D. Cioranescu, J.L. Lions, eds.), Longman, Harlow (1998), 327–338

83. *Modified Landau-Lifshitz equation for ferromagnetism.* Physica B, 233 (1997), 365–369

82. *Motion by mean curvature and nucleation.* C. R. Acad. Sc. Paris, Serie I, 325 (1997), 55–60

81. *Two-scale model of phase transitions.* Physica D, 106 (1997), 66–80

80. *Hysteresis and free boundary problems.* In: Free boundary problems, theory and applications (M. Niezgodka, P. Strzelecki, eds.), Longman, Harlow (1997), 166–174

79. *Mathematical models of hysteresis.* In: Modelling and optimization of distributed parameter systems (K. Malanowski et al., ed.), Chapman and Hall (1996), 71–80

78. *Two-scale Stefan problem.* In: Nonlinear Analysis and Applications (N. Kenmochi, M. Niezgodka, P. Strzelecki, eds.) Gakkotosho Scientific (1996), 405–424

77. *P.D.E.s with hysteresis operators.* In: Proceedings of the First World Congress of Nonlinear Analysts (V. Lakshmikantham). De Gruyter, Berlin (1996), 775–785

76. (with N. Kenmochi) *Asymptotic stability for nonlinear PDE's with hysteresis.* Euro Jnl. Applied Mathematics, 5 (1994), 39–56

75. *Remarks on the Stefan Problem with Surface Tension.* In: Boundary value problems for partial differential equations and applications (C. Baiocchi, J.L. Lions, eds.), Dunod, Paris (1993), 455–460

74. *Hysteresis and semigroups.* In: Models of hysteresis (A. Visintin, ed.), Longman, Harlow (1993), 192–206

73. *Accretivity results for nonlinear systems.* Differential and Integral Equations, 6 (1993), 773–793

72. (with P.L. Colli) *Doubly nonlinear evolution equations accounting for dissipation.* In: Free boundary problems involving solids (J. M. Chadam, H. Rasmussen, eds.), Longman, Harlow (1993), 14–19

71. (with N. Kenmochi) *Asymptotic stability for parabolic variational inequalities with hysteresis.* In: Models of hysteresis (A. Visintin, ed.), Longman, Harlow (1993), 59–70

70. (with N. Kenmochi, T. Koyama) *On a class of variational inequalities with memory terms.* In: Progress in P.D.E.s: elliptic and parabolic problems (C. Bandle, J. Bemelmans, M. Chipot, M. Grter, J. Saint Paulin, eds.), Longman, Harlow (1992), 164–175

69. (with G. Anzellotti, S. Baldo) *Asymptotic behaviour of the Landau-Lifshitz model of ferromagnetism.* Appl. Math. Optim., 23 (1991), 171–192

68. *Generalized coarea formula and fractal sets.* Japan J. Appl. Math., 8 (1991), 175–201

67. *Pattern evolution.* Ann. Scuola Norm. Sup. Pisa, 17 (1990), 197–225 (Errata Corrige: 18 (1991), 319–320)

66. (with P.L. Colli) *On a class of doubly nonlinear evolution problems.* Communications in P.D.E.s, 15 (1990), 737–756

65. *A collection of references on hysteresis.* Banach Center Publications, 24, Numerical Analysis and Mathematical Modelling, Warsaw (1990), 321–327

64. (with P.L. Colli, M. Fremond) *Thermomechanical evolution of a shape memory material.* Quart. Appl. Math., 48 (1990), 31–47

63. *Surface tension effects in two phase systems.* In Free Boundary Problems (K.-H. Hoffmann, J. Sprekels, eds.), Longman (1990), 665–671

62. *Nonconvex functionals related to multiphase systems.* S.I.A.M. J. Math. Anal., 21 (1990), 1281–1304

61. *Models of pattern formation.* C. R. Acad. Sci. Paris, 309 (1989), Série I, 429–434

60. *The Stefan problem with surface tension.* In Mathematical Models of Phase Change Problems (J.F. Rodrigues, ed.), Birkhäuser, Basel (1989), 191–213

59. *Generalized coarea formula.* In Recent Advances in Nonlinear Elliptic and Parabolic Problems (P. Benilan, M. Chipot, L.C. Evans and M. Pierre, eds.), Longman, Harlow (1989), 333–340

58. (with M. Brokate) *Properties of the Preisach model for hysteresis.* J. Reine Angew. Math., 402 (1989), 1–40

57. (with C. Verdi) *Numerical approximation of the Preisach model for hysteresis.* Mathematical Modelling and Numerical Analysis, 23 (1989), 335–356

56. (with E. Magenes, C. Verdi) *Theoretical and numerical results on the two-phase Stefan problem.* S.I.A.M. J. Numer. Anal., 26 (1989), 1425–1438

55. (with P.L. Colli) *A free boundary problem of biological interest.* Math. Methods Appl. Sci., 11 (1989), 79–93

54. *Partial differential equations in domains with self-contact.* Rend. Sem. Mat. Univ. Padova , 81(1989), 37–48

53. *Models of hysteresis.* Rend. Semin. Mat. Fis. di Milano, 58 (1988), 221–238

52. (with K.-H. Hoffmann, J. Sprekels) *Identification of hysteresis loops.* J. Comput. Phys., 78 (1988), 215–230

51. *Surface tension effects in phase transitions.* In Material Instabilities in Continuum Mechanics and Related Mathematical Problems (J.M. Ball, ed.), Clarendon Press, Oxford (1988), 505–537

50. *Mathematical models of hysteresis.* In Topics in Nonsmooth Mechanics (J.J. Moreau, P.D. Panagiotopoulos, G. Strang, eds.), Birkhäuser, Basel (1988), 295–326

49. (with C. Verdi) *Error estimates for a semi-explicit numerical scheme for Stefan-type problems.* Numer. Math., 52 (1988), 165–185

48. (with D. Blanchard, M. Fremond) *Phase change with dissipation.* In Thermo-mechanical coupling in Solids (H.D. Bui, Q.S. Nguyen, eds.), North-Holland, Amsterdam (1987), 411-418

47. (with C. Verdi) *A mathematical model of the austenite-pearlite transformation in plain steel based on Scheil's additivity rule.* Acta metall., 35 (1987), 2711–2717

46. (with C. Verdi) *Numerical analysis of the multidimensional Stefan problem with supercooling and superheating.* Boll. Un. Mat. Ital., (7) 1-B (1987), 795–814

45. *Mathematical models of solid-solid phase transitions in steel.* I.M.A. J. Appl. Math., 39 (1987), 143–157

44. *Supercooling and superheating effects in heterogeneous systems.* Quart. Appl. Math., 45 (1987), 239–263

43. *Stefan problem with a kinetic condition at the free boundary.* Ann. Mat. Pura Appl., 146 (1987), 97–122

42. *Coupled thermal and electromagnetic evolution in a ferromagnetic body.* Z. Angew. Math. Mech., 67 (1987), 409–417

41. *Rheological models and hysteresis effects.* Rend. Sem. Mat. Univ. Padova, 77 (1987), 213–243

40. *Partial differential equations with hysteresis.* In Nonlinear Parabolic Equations: Qualitative Properties of Solutions (L. Boccardo, A. Tesei, eds.), Pitman, Boston (1987), 226–232

39. *Evolution problems with hysteresis in the source term.* S.I.A.M. J. Math Anal., 17 (1986), 1113–1138

38. *On supercooling and superheating effects in phase transitions.* Boll. Un. Mat. Ital., An. Funz. Appl., 5 (1986), 293–311

37. *A new model for supercooling and superheating effects.* I.M.A. J. Appl. Math., 36 (1986), 141–157

36. (with M. Fremond) *Dissipation dans le changement de phase. Surfusion. Changement de phase irréversible.* C. R. Acad. Sc. Paris, 301 (1985), Série I, 1265–1268

35. *Supercooling and superheating in phase transitions.* I.M.A. J. Appl. Math., 35 (1985), 233–256

34. *On hysteresis in phase transitions.* Control and Cybernetics, 14 (1985), 297–307

33. *On some microscopic models of ferromagnetism.* Rend. Sem. Mat. Fis. Torino, 43 (1985), 371–388

32. *On Landau-Lifshitz equations for ferromagnetism.* Japan J. Appl. Math., 2 (1985), 69–84

31. (with C. Verdi) *Numerical approximation of hysteresis problems.* I.M.A. J. Num. Anal., 5 (1985),447–463

30. *Study of the eddy-current problem taking account of Hall's effect.* Appl. Anal., 19 (1985), 217–226

29. *Stefan problem with phase relaxation.* I.M.A. J. Appl. Math., 34 (1985), 225–245

28. *Models for supercooling and superheating effects.* In Free Boundary Problems: Theory and Applications (A. Bossavit, A Damlamian, M. Fremond, eds.), Pitman, Boston (1985)

27. *Partial differential equations with hysteresis functionals.* In Proceedings of the Sixth International Simposium on Computing Methods in Applied Sciences and Engineering (R. Glowinski, J.-L. Lions, eds.), North-Holland, Amsterdam (1984), 149–161

26. *On the evolution of ferromagnetic media.* Math. Modelling, 5 (1984), 43–61

25. *On variable hysteresis operators.* Boll. Un. Mat. Ital., (6) 3-B (1984), 837–857

24. *On the Preisach model for hysteresis.* Nonlinear Anal. T.M.A. , 9 (1984), 977–996

23. *Strong convergence results related to strict convexity.* Communications in P.D.E.s, 9 (1984), 439–466

22. *Stefan problem with surface tension.* Pubblicazione n. 424 dell' I.A.N. del C.N.R, Pavia (1984)

21. *On the well-posedness of some optimal control problems.* Rend. Acc. Naz. Lincei, 75 (1984), 34–41

20. (with H.W. Alt, S. Luckhaus) *On nonstationary flow through porous media.* Ann. Matem. Pura Appl., 136 (1984), 303–316

19. *Continuity properties of a class of hysteresis functionals.* Atti Sem. Mat. Univ. Modena, 32 (1983), 232–247

18. (with A. Damlamian) *Une généralization vectorielle du modèle de Preisach pour l'hystérésis.* C. R. Acad. Sc. Paris, 297 (1983), Série I, 437–440

17. (with S. Luckhaus) *Phase transition in a multicomponent system.* Manuscripta Math., 43 (1983), 261–288

16. *The Stefan problem for a degenerate parabolic equation.* In Free Boundary Problems: Theory and Applications (A. Fasano, M. Primicerio, eds.), Pitman, London (1983), 419–430

15. *General free boundary evolution problems in several space dimensions.* J. Math. Anal. Appl., 95 (1983), 117–143

14. (with E. Magenes, C. Verdi) *Semigroup approach to the Stefan problem with non-linear flux.* Rend. Acc. Naz. Lincei, 75 (1983), 24–33

13. *Phase transition in a superconducting multifilamentary composite.* Rend. Istit. Lomb., 116 (1982), 131–148

12. *A phase transition problem with delay.* Control and Cybernetics, 11 (1982), 5–18

11. *A model for hysteresis of distributed systems.* Ann. Mat. Pura Appl., 131 (1982), 203–231

10. *Hystérésis dans le système distribués.* C. R. Acad. Sc. Paris, 293 (1981), Série I, 625–629

9. (with L.Caffarelli, A.Friedman) *A free boundary problem describing transition in a superconductor.* S.I.A.M. J. Math. Anal., 12 (1981), 679–690.

8. *General free boundary problems in several space dimensions.* Atti 4 Convegno S.A.F.A., Liguori, Napoli (1981), 391–397

7. (with M. Niezgodka, I. Pawlow) *On multi-phase Stefan problems with nonlinear flux at the boundary in several space variables.* Pubblicazione n.293 dello I.A.N. del C.N.R. di Pavia (1981)

6. (with M. Niezgodka, I. Pawlow) *Remarks on the paper by A. Visintin "Sur le problème de Stefan avec flux non linéaire".* Boll. Un. Mat. Ital., Suppl. An. Funz. Appl., (5) 18-C (1981), 87–88

5. *Sur le problème de Stefan avec flux non linéaire.* Boll. Un. Mat. Ital., Suppl. An. Funz. Appl., (5) 18-C (1981), 63–86

4. *An existence result for an evolution free boundary filtration problem.* Atti di un seminario tenuto a Pavia nel 1979. Ist. Naz. Alta Matem., Roma (1980), vol. I, 219–227

3. *Existence results for some free boundary filtration problems.* Ann. Matem. Pura Appl., 124 (1980), 293–320

2. (with A. Quarteroni) *On the numerical solution of a nonlinear variational equation related to a problem.* Boll. Un. Mat. Ital., (5) 17-B (1980), 204–231

1. *Study of a free boundary filtration problem by a nonlinear variational equation.* Boll. Un. Mat. Ital., (5) 16-B (1979), 212–237

Other publications

Sulla comunicazione matematica. Boll. Un. Mat. Ital. Sez. A, Serie VIII, 2-A (1999), 83–93

Sull'editoria matematica (nota ad un documento dell'A.R.L.) Boll. Un. Mat. Ital., Serie VIII, IV-A (2001), Aprile 2001, 163–171

Review of Hysteresis and Phase Transitions of M. Brokate and J. Sprekels. SIAM Review, 39 (1997) 559–561