

Fabio Augusto Milner's
LIST OF PUBLICATIONS

1. *Numerical Methods for a Model of Cardiac Muscle Contraction*, *Calcolo* **XX** (1983), 129-141 (with J. Douglas, Jr.).
2. *Mixed Finite Element Methods for Quasilinear Second-Order Elliptic Problems*, *Math. Comp.* **44** (1985), 303-320.
3. *A Primal Hybrid Finite Element Method for Quasilinear Second Order Elliptic Problems*, *Numer. Math.* **47** (1985), 107-122.
4. *Interior and Superconvergence Estimates for Mixed Methods for Second Order Elliptic Equations*, *R.A.I.R.O. M² AN* **19** (1985), 397-428 (with J. Douglas, Jr.).
5. *Some New L^∞ -Error Estimates for Mixed Finite Element Methods*, *Mat. Apl. Comput.* **5** (1986), 249-264 (with Y. Kwon).
6. *Numerical Methods for a Model of Population Dynamics*, *Calcolo* **XXIV** (1987), 247-254 (with J. Douglas, Jr.).
7. *L^∞ -Error Estimates for Mixed Methods for Semilinear Second Order Elliptic Equations*, *SIAM Num. Anal.* **25** (1988), 46-53 (with Y. Kwon).
8. *A Finite Element Method for a Two-Sex Model of Population Dynamics*, *Numer. Meth. for Partial Diff. Eqs.* **4** (1988), 329-345.
9. *A Second Order Splitting Method for the Cahn-Hilliard Equation*, *Numer. Math.* **54** (1989), 575-590 (with C. M. Elliott and D. A. French).
10. *L^∞ -Error Estimates for Linear Elasticity Problems*, *J. Comp. Appl. Math.* **25** (1989), 305-313.
11. *A Finite Difference Method for a Two-Sex Model of Population Dynamics*, *SIAM Num. Anal.* **26** (1989), 1474-1486 (with T. J. Arbogast).
12. *Numerical Methods for Models of Population Dynamics*, *Proc. Conf. "Numerical Methods and Applications"*, Bulgarian Academy of Sciences, Sofia, 1989, pp. 294-303.
13. *The Cahn-Hilliard Equation of Phase Separation: The Case of Near Constant Mobility*, *Proc. "Vth International Symposium on Numerical Methods in Engineering"*, vol. 2, Springer Verlag, 1989, pp. 117-122.
14. *A Numerical Method for a Model of Population Dynamics with Spatial Diffusion*, *Comp. and Math. with Applic.* **19** (1990), 31-44.
15. *A Mixed Finite Element Method for the Cahn-Hilliard and the Sivashinsky Equations*, *Mat. Apl. Comput.* **9** (1990), 3-22.
16. *A Finite Element Method for a Model of Population Dynamics with Spatial Diffusion*, *Proc. "Equadiff VII"*, 7th Czechoslovak Conference on Differential Equations and Their Applications (held in Prague 1989), J. Kurzweil (Ed.), BSB B. G. Teubner Verlagsgesellschaft, Leipzig, 1990, pp. 285-288.
17. *Nonlinear Age-Dependent Population Dynamics with Constant Size*, *SIAM J. Math. Anal.* **22** (1991), 129-137 (with T. Kostova).
18. *Some Examples of Nonstationary Populations of Constant Size*, *Differential Equations Models in Biology, Epidemiology and Ecology*, *Lectures Notes in Biomathematics*, vol. 92, Springer Verlag, 1991, pp. 219-234 (with T. Kostova).
19. *A Numerical Method for a Model of Inhomogeneous Muscle Fibers: A Parallel Implementation*, *Proc. International Youth Workshop "Monte Carlo Methods and Parallel Algorithms"*, World Scientific Publishing, Singapore, 1991, pp. 34-43.
20. (in Italian) *A Model for AIDS among Intra-Venous Drug Users Structured by Promiscuity*, III^d Project of Research on AIDS, Progress Report, Orbetello, Istituto Superiore della Sanità, Rome, Italy, 1991 (with M. Iannelli, R. Loro, A. Pugliese, and G. Rabbio).
21. *An S-I-R Model for Epidemics with Diffusion to Avoid Infection and Overcrowding*, *Proc. of the Thirteenth IMACS World Congress on Computation and Applied Mathematics*, vol. 3, R. Vichnevetsky and J. J. H. Miller (Eds.), Dublin, Ireland, 1991, pp. 1444-1445 (with D. B. Meade).
22. *Error Estimates for Mixed Finite Element Methods on Locally Refined Rectangular Meshes*, *Mafelap 1990, The Mathematics of Finite Elements and Applications*, vol. VII, J. R. Whiteman (Ed.), Academic Press, London, 1991, pp. 261-269 (with T. Dimov).

23. *Analytical and Numerical Results for The Age-Structured S-I-S Model with Mixed Inter-Intracohort Transmission*, SIAM J. Math. Anal. **23** (1992), 662-688.
24. *Rapidly Converging Numerical Algorithms for Models of Population Dynamics*, J. Math. Biol. **30** (1992), 733-753 (with G. Rabbio).
25. *Mixed Finite Element Methods for Quasilinear Second Order Elliptic Problems: the p-Version*, R.A.I. R.O. *M²AN* **26** (1992), 913-931 (with M. Suri).
26. *An AIDS Model with Distributed Incubation and Variable Infectivity: Applications to IV-Drug Users in Latium*, Europ. J. Epidem. **8** (1992), 585-593 (with M. Iannelli, R. Loro, A. Pugliese, and G. Rabbio).
27. *"Numerical Analysis" entry*, Dictionary of Physical Sciences (in Italian), Istituto dell'Enciclopedia Italiana "Giovanni Treccani", Rome, 1992.
28. *S-I-R Epidemic Models with Directed Diffusion*, Mathematical Aspects of Human Diseases, Giuseppe Da Prato (ed.), Applied Mathematics Monographs 3, Giardini Editori, Pisa, Italy, 1992 (with D. B. Meade).
29. *Numerical Methods for a Model of Inhomogeneous Muscle Fibers*, Numer. Meth. for Partial Diff. Eqs. **9** (1993), 51-62.
30. *Age Structured Populations with History Dependent Mortality and Natality*, Calcolo **30** (1993), 29-39.
31. *Separable Solutions of an Age-Dependent Population Model with Age Dominance and Their Stability*, Math. Biosc. **119** (1994), 115-125 (with M. Langlais).
32. *A Mixed Finite Element Method for a Strongly Nonlinear Second Order Elliptic Problem*, Math. Comp. **64** (1995), 973-988 (with E.-J. Park).
33. *Mathematical Models of Epidemics with Screening and Applications to HIV/AIDS*, Mathematical Population Dynamics: Analysis of Heterogeneity, vol. 1, Theory of Epidemics, Proc. "3rd International Conference on Mathematical Population Dynamics", Pau, France, 1992, Wuerz Publishing Ltd., Winnipeg, Canada, 1995, pp. 279-294 (with M. Y. Kim).
34. *A Mathematical Model of Epidemics with Screening and Variable Infectivity*, Mathl. Comput. Modelling **21** (1995), 29-42 (with M. Y. Kim).
35. *An Age-Structured Model of Population Dynamics with Dominant Ages, Delayed Behavior, and Oscillations*, Math. Pop. Studies **5** (1995), 359-375 (with T. Kostova).
36. *A course on industrial mathematics for undergraduates*, Proc. ICMI International Conference "Regional Collaboration in Mathematics Education," Melbourne, Australia, 1995.
37. *Self-esteem, achievement motivation, and mathematics learning*, Proc. ICMI-CHINA Regional Conference on Mathematics Education, Shanghai Educational Publishing House, Shanghai, China, 1995, pp. 130-131.
38. *Some observations on mixed methods for fully nonlinear parabolic problems in divergence form*, Appl. Math. Lett. **9** (1996), 75-81 (with M. Y. Kim and E.-J. Park).
39. *¿Existen equilibrios endémicos múltiples?*, Proc. "Seventh International Congress of Biomathematics," Buenos Aires, Argentina, 1996, pp. 63-71 (with Y. Cha and M. Iannelli).
40. *Mixed Finite Element Methods for Hamilton-Bellman-Jacobi Type Equations*, IMA J. Num. Anal. **16** (1996), 399-412 (with E.-J. Park).
41. *Numerical Analysis of A Model for the Spread of HIV/AIDS*, SIAM J. Num. Anal. **33** (1996), 864-882 (with M. Iannelli, R. Loro, A. Pugliese, and G. Rabbio).
42. *Non-unique positive steady states in population dynamics and epidemics models and their stability*, Differential Equations and Applications to Biology and to Industry, Proc. of June 1-4, 1994 Claremont International Conference dedicated to the memory of Stavros Busenberg (1941-1993), World Scientific Co., Singapore, 1996, pp. 369-383 (with M. Langlais and S. Busenberg).
43. *Mixed finite element methods for nonlinear elliptic problems: The p-version*, Num. Meth. for Partial Diff. Eqs. **12** (1996), 729-741 (with M. Lee).
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45. *The HIV/AIDS epidemic among drug injectors: a study of contact structure through a mathematical model*, Math. Biosc. **139** (1997), 25-58 (with M. Iannelli, A. Pugliese, and M. Gonzo).

46. *Mixed finite element methods for nonlinear elliptic problems: The hp-version*, J. Comp. Appl. Math. **85** (1997), 239-261 (with M. Lee).
47. *Are multiple endemic equilibria possible?*, Advances in Mathematical Population Dynamics —Molecules, Cells and Man, Proc. “Fourth International Conference on Mathematical Population Dynamics,” O. Arino, D. Axelrod, M. Kimmel (eds.), World Scientific Co., Singapore, 1997, pp. 779-788 (with Y. Cha and M. Iannelli).
48. *A first-second order splitting method for a third order partial differential equation*, Num. Meth. for Partial Diff. Eqs. **14** (1998), 89-96 (with Q. Duan and G. Li).
49. *Existence and uniqueness of endemic states for the age-structured S-I-R epidemic model*, Math. Biosc. **150** (1998), 177-190 (with Y. Cha and M. Iannelli).
50. *A new mathematical model of schistosomiasis*, Proc. “International Conference on Mathematical Models in Medical and Health Sciences” (Nashville, TN, 1997), Vanderbilt Univ. Press, Nashville, TN, 1998, pp. 117-128 (with Z. Feng).
51. *A mixed finite element method for a third order partial differential equation*, Mat. Apl. Comput. **17** (1998), 377-384 (with G. Li).
52. *A new approach to mathematical modeling of host-parasite systems*, Comp. and Math. with Applic. **37** (1999), 93-110 (with C. A. Patton).
53. *Periodic solutions: A robust numerical method for an S-I-R model of epidemics*, J. Math. Biol. **39** (1999), 471-492 (with A. Pugliese).
54. *Existence and uniqueness of classical solutions of the two-sex model of population dynamics*, Math. Pop. Studies **7** (1999), 111-129 (with M. Martcheva).
55. *Stability change of an epidemic model*, Dynamic Syst. and and Applic. **9** (2000), 361-376 (with Y. Cha and M. Iannelli).
56. *The mathematics of sex and marriage revisited*, Math. Pop. Studies **9** (2001), 123-141 (with M. Martcheva).
57. *On the approximation of the Lotka-McKendrick equation with finite life-span*, J. Comp. Appl. Math. **136** (2001), 245-254 (with M. Iannelli).
58. *Vibrations of a beam and related statistical properties*, Math. and Comp. Mod. **34** (2001), 657-675 (with R. J. Bernhard and G. Rabbio).
59. *Existence of solutions for a host-parasite model*, J. Comp. Appl. Math. **137** (2001), 331-361 (with C. A. Patton).
60. *A two-strain TB model with age of infection*, SIAM J. Appl. Math. **62** (2002), 1634-1656 (with Z. Feng and M. Iannelli).
61. *Effects of density and age dependence on the transmission dynamics of schistosomes*, Math. Biosc. **177-178** (2002), 271-286 (with Z. Feng and C.-C. Li).
62. *A diffusion model for host-parasite interaction*, J. Comp. Appl. Math. **154** (2003), 273-302 (with C. A. Patton).
63. *Existence and uniqueness of solutions for a diffusion model of host-parasite dynamics*, J. Math. Anal. Applic. **279** (2003), 463-474 (with M. Langlais).
64. *Definition of a high frequency threshold for plates and acoustical spaces*, J. Sound and Vibrat. **277** (2004), 647-667 (with R. J. Bernhard and G. Rabbio).
65. *Estimation of some parameters governing the transmission dynamics of schistosomes*, Appl. Math. Lett. **17** (2004), no. 10, 1105-1112 (with Z. Feng, J. Eppert, and D. J. Minchella).
66. *Schistosomiasis models with two migrating human groups*, Math. Comp. Model. **41** (2005), 1213-1230 (with Z. Feng and C.-C. Li).
67. *How may segregation from sexual activity affect population growth?*, Math. Biosc. and Engin. **2** (2005), 579-588.
68. *Editorial: epidemics in wildlife*, Math. Pop. Stud. **13** (2006), no. 3, 117-118 (with M. Iannelli and T. Kostova).
69. *A schistosomiasis model with an age-structure in human hosts*, Math. Biosc. **205** (2007), 83-107 (with Z. Feng and P. Zhang).
70. *The effect of non-reproductive groups on persistent sexually transmitted diseases*, Math. Biosc. and Engin. **4** (2007), 505-522 (with D. Maxin).

71. *The application of an age-structured model with unbounded mortality to demography*, Math. Biosc. **208** (2007), 495-520 (with O. Angulo and J. C. López-Marcos).
72. *Analysis of an S-I-R model with directed spatial diffusion*, Math. Pop. Stud. **15** (2008), 160-181 (with R. Zhao).
73. *A deterministic model of schistosomiasis with spatial structure*, Math. Biosc. and Engin. **5** (2008), 505-522 (with R. Zhao).
74. *A mathematical model of Schistosoma mansoni in Biomphalaria glabrata with control strategies*, Bull. Math. Biol. **70** (2008), 1886-1905 (with R. Zhao).
75. *A fourth-order method for numerical integration of age- and size-structured population models*, Numer. Meth. Part. Diff. Eq. **25** (2009), no. 4, 918-930 (with M. Iannelli and T. Kostova).
76. *The logistic, two-sex, age-structured population model*, J. Biol. Dynamics **3** (2009), 252-270 (with K. Yang).
77. *The role of sexually abstained groups in two-sex demographic and epidemic logistic models with nonlinear mortality*, J. Theor. Biol. **258** (2009), no. 3, 389-402 (with D. Maxin).
78. *Editorial*, J. Theor. Biol. **258** (2009), no. 3, 337-338.
79. *An SEIQR model for childhood diseases*, J. Math. Biol. **59** (2009), no. 4, 535-561 (with D. Gerberry).
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81. *A numerical method for nonlinear age-structured population models with finite maximum age*, J. Math. Anal. & Appl. **361** (2010), 150-160 (with O. Angulo, J. C. López-Marcos, and M. A. López-Marcos).
82. *A new mathematical model of syphilis*, Math. Model. Nat. Phenom. **5**, no. 6, 96-108 (with R. Zhao).
83. *Editorial: disease control*, Math. Pop. Stud. **17** (2010), no. 2, 67-68.

BOOKS

- (with M. Iannelli and M. Martcheva) Gender-Structured Population Modeling: Mathematical Methods, Numerics and Simulations, SIAM, Philadelphia, USA, April 2005.
- (with M. Iannelli) Age-Structured Populations: An Introduction to the Mathematical Models and Methods, contract signed with Kluwer, Amsterdam, Netherlands.