

## ARTÍCULOS PUBLICADOS

1. **M.L. Hbid, E. Sánchez and R. Ouifki** (2013) *Hopf bifurcation via the Poincaré procedure in delay-differential equations with two delays*. Revista Matemática Complutense, Vol.26, N.1: 193-213.
2. **R. Bravo de la Parra, M. Marvá, E. Sánchez and L. Sanz** (2013) *Reduction of discrete dynamical systems with applications to dynamics population models*. Math. Mod. Nat. Phenom. Vol.8, N.6: 107-129.
3. **P. Auger, J.C. Poggiale and E. Sánchez** (2012) *A review on spatial aggregation methods involving several time scales*. Ecological Complexity **10**: 12-25.
4. **E. Sánchez, P. Auger and J.C. Poggiale** (2011) *Two-time scales in spatially structured models of population dynamics*. J. Math. Anal. Appl. **375**: 149-165.
5. **M.L. Hbid, M. Louihi and E. Sánchez** (2010) *A threshold state-dependent delayed functional equation arising from marine population dynamics: modelling and analysis*. J. Evol. Equat. **10**: 905-928.
6. **M. Marvá, E. Sánchez, R. Bravo de la Parra and L. Sanz** (2009) *Reduction of slow-fast discrete models coupling migration and demography*. J. Theor. Biol. **258**: 371-379.
7. **J. El Gordhaf, M.L. Hbid, E. Sánchez and M. Langlais** (2009) *On the evolution of spatially distributed urban populations: Modelling and mathematical analysis*. Nonlinear Analysis: Real World Applications. **10**: 2945-2960.
8. **P. Gómez-Mourelo, E. Sánchez, L. Casasús and G.F. Webb** (2008) *A fully continuous individual-based model of tumor cell evolution*. C.R. Biologies. **331**: 823-836.
9. **P. Auger, R. Bravo de la Parra, J.C. Poggiale, E. Sánchez and L. Sanz** (2008) *Aggregation methods in dynamical systems and applications in population and community dynamics*. Physics of Life Reviews. **5**: 79-105.
10. **L. Sanz, R. Bravo de la Parra, E. Sánchez**. (2008) *Approximate reduction of nonlinear discrete models with two time scales*. Journal of Difference Equations and Applications. Vol.14, N.6: 607-627.

11. **P. Auger, R. Bravo de la Parra, J.C. Poggiale, E. Sánchez and T. Nguyen-Huu.** (2008) *Aggregation of Variables and Applications to Population Dynamics*. In *Structured Population Models in Biology and Epidemiology*. P. Magal and S. Ruan Eds. Lecture Notes in Mathematics, Mathematical Biosciences Subseries, Vol. 1936, pgs 209-264.
12. **O. Arino, A. Bertuzzi, A. Gandolfi, E. Sánchez and C. Sinisgalli.** (2007) *A model with "growth retardation" for the kinetic heterogeneity of tumour cell populations*. *Mathematical Biosciences*. **206**: 185-199.
13. **M.L. Hbid, E. Sánchez and R. Bravo de la Parra.** (2007) *State-dependent delays associated to threshold phenomena in structured population dynamics*. *Mathematical Models and Methods in Applied Sciences*. Vol.17, N.6: 877-900.
14. **J. Dyson, E. Sánchez, R. Villella-Bressan and G.F. Webb.** (2007) *An age and spatially structured model of tumor invasion with haptotaxis*. *Discrete and Continuous Dynamical Systems, Series B*. Vol.8, N.1: 45-60.
15. **J. Dyson, E. Sánchez, R. Villella-Bressan and G.F. Webb.** (2007) *Stabilization of telomeres in nonlinear models of proliferating cell lines*. *J. Theor. Biology*. **244**: 400-408.
16. **E. Sánchez, R. Bravo de la Parra, P. Auger and P. Gómez-Moureló.** (2006) *Time scales in linear delayed differential equations*. *J. Math. Anal. Appl.* **323**: 680-699.
17. **O. Arino and E. Sánchez** (2006) *A theory of linear delay differential equations in infinite dimensional spaces*. In *Delay Differential Equations and Applications*. O. Arino, M.L. Hbid and E. Ait Dads Eds. NATO Science Series II: Mathematics, Physics and Chemistry, Vol. 205: 285-346.
18. **O. Arino and E. Sánchez.** (2005) *A saddle point theorem for functional state-dependent delay differential equations*. *Discrete and Continuous Dynamical Systems, Series A*. Vol. 12, N.4: 687-722.
19. **O. Arino, A. Bertuzzi, A. Gandolfi, E. Sánchez and C. Sinisgalli.** (2005) *The asynchronous exponential growth property in a model for the kinetic heterogeneity of tumour cell populations*. *J. Math. Anal. and Applications*. **302**: 521-542.
20. **O. Arino and E. Sánchez.** (2004) *Delays induced in population dynamics*. In *Mathematical Modelling of Population Dynamics*. Banach Center Publications, Vol.63: 9-46. Varsovia.

21. **P. Auger, R. Bravo de la Parra, S. Morand and E. Sánchez.** (2002) *A predator-prey model with predators using hawk and dove tactics.* Math. Biosci. **177-178**: 185-200.
22. **P. Auger, R. Bravo de la Parra and E. Sánchez.** (2001) *Behavioral dynamics of two interacting hawk-dove populations.* Mathematical Models and Methods in Applied Sciences. Vol. 11, N.4: 645-661.
23. **O. Arino, E. Sánchez and A. Fathallah.** (2001) *State-dependent delay differential equations in population dynamics: Modelling and analysis.* Fields Institute Communications. Vol. 29: 19-36.
24. **D. Pontier, P. Auger, R. Bravo de la Parra and E. Sánchez.** (2000) *The impact of behavioral plasticity at individual level on domestic cat population dynamics.* Ecological Modelling. Vol. 133, N.1-2: 117-124.
25. **R. Bravo de la Parra, O. Arino, E. Sánchez and P. Auger.** (2000) *A model of an age-structured population with two time scales.* Math. Comp. Modelling. **31**: 17-26.
26. **O. Arino, E. Sánchez, R. Bravo de la Parra and P. Auger.** (1999) *A singular perturbation in an age-structured population model.* SIAM J. Appl. Math. Vol. 60, N.2: 408-436.
27. **R. Bravo de la Parra, E. Sánchez, O. Arino and P. Auger.** (1999) *A discrete Model with Density Dependent Fast Migration.* Math. Biosci. **57**: 91-109.
28. **O. Arino and E. Sánchez.** (1998) *An integral equation of cell population dynamics formulated as an abstract delay differential equation.* Math. Models and Methods in Appl. Sciences. Vol. 8, N.4: 713-735.
29. **O. Arino, E. Sánchez, and R. Bravo de la Parra.** (1998) *A Model of an Age-Structured Population in a Multipatch Environment.* Math. Comput. Modelling. Vol. 27, N.4: 137-150.
30. **P. Auger, R. Bravo de la Parra and E. Sánchez.** (1998) *Hawk-Dove game and competition dynamics.* Math. Comput. Modelling. Vol. 27, N.4: 89-98.
31. **R. Bravo de la Parra and E. Sánchez.** (1998) *Aggregation methods in population dynamics discrete models.* Math. Comput. Modelling. Vol. 27, N.4: 23-39.

32. **O. Arino, E. Sánchez and G.F. Webb.** (1997) *Necessary and sufficient conditions for asynchronous exponential growth in age structured cell populations with quiescence.* J. Math. Anal. and Appl. **215**: 499-513.
33. **O. Arino and E. Sánchez.** (1997) *A Survey of Cell Population Dynamics.* Journal of Theoretical Medicine Vol 1: 35-51.
34. **E. Sánchez, P. Auger and R. Bravo de la Parra.** (1997) *Influence of Individual Aggressiveness on the Dynamics of Competitive Populations.* Acta Biotheoretica **45**: 321-333.
35. **R. Bravo de la Parra, E. Sánchez and P. Auger.** (1997) *Time scales in density dependent discrete models.* J. Biol. Systems, Vol. 5, N.1: 111-129.
36. **O. Arino, E. Sánchez and G.F. Webb.** (1997) *Polynomial Growth Dynamics of Telomere Loss in a Heterogeneous Cell Population.* Dynamics of Continuous, Discrete and Impulsive Systems **3**: 263-282.
37. **O. Arino and E. Sánchez.** (1996) *A variation of constants formula for an abstract functional differential equation of retarded type.* Diff. and Int. Equat. Vol. 9 N.6: 1305-1320.
38. **E. Sánchez, R. Bravo de la Parra and P. Auger.** (1995) *Linear discrete models with different time scales.* Acta Biotheoretica **43**: 465-479.
39. **R. Bravo de la Parra, P. Auger and E. Sánchez.** (1995) *Aggregation methods in discrete models.* J. Biol. Systems. Vol. 3, N.2: 603-612.
40. **O. Arino and E. Sánchez.** (1995) *An abstract differential equation arising from cell population dynamics.* J. Biol. Systems Vol. 3, N.2: 469-481.
41. **O. Arino and E. Sánchez.** (1995) *Linear Theory of Abstract Functional Differential Equations of Retarded Type.* J. Math. Anal. Appl. **191**: 547-571.
42. **E. Sánchez, O. Arino and M. Kimmel.** (1991) *Noncompact Semigroup of Operators Generated by Cell Kinetics Models.* Diff. and Int. Equat. Vol 4, N.6: 1233-1249.
43. **M. Lobo and E. Sánchez.** (1982) *On a class of singular perturbations with non-coercive limit problem.* Boll. Un. Mat. Ital. **1B**: 171-185

44. **E. Sánchez.** (1982) *Una perturbación singular en un problema no lineal de transmisión.* Rev. Real Acad. Ciencias de Madrid Tomo LXXVI Cuad. 1: 152-172
45. **E. Sánchez.** (1979) *Un problema de transmisión no lineal de tipo hiperbólico-parabólico.* Coll.Math. Vol XXX Fasc. 3, 22 pgs.