

MAIN PUBLICATIONS

Contents

1	Not yet published manuscripts	1
2	Main publications	1
3	Book chapters, thesis manuscripts	6
4	Miscellaneous	7

1 Not yet published manuscripts

J.B. Burie, A. Calonnec, M. Langlais, Y. Mammeri. *Modeling the spread of a pathogen over a spatially heterogeneous growing crop*. IEEE 4th International Symposium on Plant Growth Modeling, Simulation, Visualization and Applications (PMA 12), Shanghai, China (fall 2012).

2 Main publications

Maud V.P. Charron, T. Balenghien, H. Seegers, M. Langlais, P. Ezanno. *How can diptera-borne viruses persist during unfavourable season?* PLoS ONE, 2013 8(9): e74213.

A. Ducrot, M. Langlais. *Global weak solution for a singular two component reaction-diffusion system*. Bulletin of the London Mathematical Society 2013; doi:10.1112/blms/bdt058

M. Lélou, S. Gandon, M. Langlais, M.L. Pouille, E. Gilot-Fromont. *When should a trophically and vertically transmitted parasite manipulate its intermediate host? The case of Toxoplasma gondii*. Proc R Soc B 280: 20131143. <http://dx.doi.org/10.1098/rspb.2013.1143>

M. Charron, G. Kluiters, M. Langlais, H. Seegers, M. Baylis, P. Ezanno. *Seasonal and spatial heterogeneities in host and vector abundances impact the spatiotemporal spread of bluetongue*. Veterinary Research, 2013 44:44. doi:10.1186/1297-9716-44-44

A. Ducrot, M. Langlais, P. Magal. *Multiple travelling waves for an SI-epidemic model*. Applied Math Journal Networks and Heterogeneous Media, 8-1 (2013) 171-190.

A Calonnec, B Richard, D Andrivon, A Baranger, JE Chauvin, R Faivre, P Casadebaig, S Guyader, JF Bussière, M Langlais, B Tivoli. *Modéliser les interactions entre développement de la plante, architecture du couvert et épidémies de maladies fongiques aériennes, pour une gestion durable des cultures*. Innovations Agronomiques, 28 (2013) 201-219.

P. Casadebaig, G. Quesnel, M. Langlais, R. Faivre. *A Generic Model to Simulate Air-borne Diseases as a Function of Crop Architecture*. Plos ONE, (November 2012). doi:10.1371/journal.pone.0049406

A. Calonnec, J.B. Burie, M. Langlais, S. Guyader, S. Saint-Jean, I. Sache, B. Tivoli. *Impacts of plant growth and architecture on pathogen processes and their consequences for epidemic behaviour*. European Journal of Plant Pathology, (2012). DOI : 10.1007/s10658-012-0111-5.

A. Ducrot, M. Langlais. *A singular reaction-diffusion system modelling prey-predator interactions: invasion and co-extinction waves*. Journal of Differential Equations, 253 (2012) 502-532.

A. Ducrot, M. Langlais, P. Magal. *Qualitative analysis and traveling wave solutions for the SI model with vertical transmission*. Communications in Pure and Applied Analysis, 11-1 (2012) 97-113.

M. Langlais, C. Avenet, M. Lélou, E. Gilot-Fromont. *A simplified model system for Toxoplasma gondii spread within a heterogeneous environment*. Nonlinear Dynamics 68 (2012) 381-399.

- A. Ducrot, V. Guyonne, M. Langlais. *Some remarks on the qualitative properties of solutions to a predator-prey model posed on non coincident spatial domains*. Discrete Contin. Dyn. Syst. S 4-1 (2011), 67-82.
- M. Charron, H. Seegers, M. Langlais, P. Ezanno. *Seasonal spread and control of Bluetongue in cattle*. J. Theor. Biol., 291 (2011) 1-9.
- M. Bendahmane, M. Langlais. *A reaction-diffusion system with cross-diffusion modelling the spread of an epidemic disease*, J. Evolution Equation, 10 (2010) 883-904.
- J.B. Burie, M. Langlais, A. Calonnec. *Switching from a mechanistic model to a continuous model to study at different scales the effect of vine growth on the dynamic of a powdery mildew epidemic*. Annals of Botany, (2010) 1-11, doi: 10.1093/aob/mcq233.
- C.L. Wesley, L.J.S. Allen, M. Langlais. *Models for the Spread and Persistence of Hantavirus Infection in Rodents and Indirect Transmission to Humans*. Math. Biosciences and Engineering, 7 (2010), 199-215.
- M. Lélou, M. Langlais, M.L. Pouille, E. Gilot-Fromont. *Transmission dynamics of Toxoplasma gondii along an urban-rural gradient*. Theor. Popul. Biol., 78 (2010) 139-147.
- A. Bonneu, Th. Fourcaud, A. Ducrot, M. Langlais. *Proposition of a Conceptual Density Based Model to Describe Fine Root Networks in Tree Root Systems*, In Li, B., Guo, Y., Jaeger, M. (Eds) The Third International Symposium on Plant Growth Modeling, Simulation, Visualization and Applications (PMA 09), Beijing, China. IEEE Computer Society Los Alamitos, (2010), 18-25.
- S. Anița, M. Langlais. *Stabilization strategies for some reaction-diffusion systems*. Nonlinear Analysis: Real World Applications, 10 (2009), 345-357.
- F.M. Hilker, H. Malchow, M. Langlais. *The Allee effect and infectious diseases: extinction, multistability, and the (dis)appearance of oscillations*. American Naturalist 173 (2009), 72-88.
- J. El Ghordaf, M.L. Hbid, E. Sanchez, M. Langlais. *On the evolution of spatially distributed urban populations: modelling and mathematical analysis*. Nonlinear Analysis: R.W.A., 10 (2009) 2945-2960.
- S. Anița, W.E. Fitzgibbon, M. Langlais. *Global existence and internal stabilization for a Reaction-Diffusion system posed on non coincident spatial domains*. Discrete Contin. Dyn. Syst. B, 11 (2009), 805-822.
- A. Ducrot, M. Langlais. *Travelling waves in invasion processes with pathogens*, Mathematical Models and Methods in Applied Sciences, 18 (2008), 325-349.
- A. Calonnec, P. Cartolaro, J.M. Naulin, D. Bailey, M. Langlais. *A host-pathogen simulation model: Powdery Mildew of grapevine*. Plant Pathology, 57 (2008), 493-508.
- W.E. Fitzgibbon, M. Langlais. J.J. Morgan. *A mathematical model for indirectly transmitted diseases*. Math Biosciences, 206 (2007), 233-248.
- F. Sauvage, M. Langlais, D. Pontier. *Predicting the emergence of human hantavirus disease using a combination of viral dynamics and rodent demographic patterns*. Epidemiology and Infection, 135 (2007), 46-56.
- F.M. Hilker, M. Langlais, S.-V. Petrovskii, H. Malchow. *A diffusive SI model with Allee effect and application to FIV*. Math Biosciences, 206 (2007), 61-80.
- J. Burie, A. Calonnec, M. Langlais. *Modeling of the invasion of a fungal disease over a vineyard*. Mathematical Modeling of Biological Systems, Volume II. A. Deutsch et al. eds, Birkhäuser Boston (2007), 11-21.
- S. Gaucel, M. Langlais. *Finite time and global existence for solutions to some singular reaction-diffusion systems*. Discrete Contin. Dyn. Syst. B, 8 (2007), 61-72.
- C. Wolf, F. Sauvage, D. Pontier. M. Langlais. *A multi-patch model with periodic demography for a bank vole – hantavirus system with variable maturation rate*. Math. Population Studies, 13 (2006), 153-177.

- H. Malchow, F.M. Hilker, M. Langlais, S.V. Petrovskii. *Oscillations and waves in a virally infected plankton system. Part II. Transition from Lysogeny to Lysis*. Ecological Complexity, 3 (2006), 200–208.
- D. Fouchet, S. Marchandeu, M. Langlais, D. Pontier. *Waning of maternal immunity and the impact of diseases: the example of myxomatosis in natural rabbit populations*. J. Theor. Biology, 242 (2006), 81–89.
- T. Aliziane, M. Langlais. *Degenerate diffusive seir model with logistic population control*. Acta Math. Univ. Comenianae Vol. LXXV, 1(2006), 185–198.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *A degenerate Reaction-Diffusion system modeling atmospheric dispersion of pollutants*. J. Math. Anal. and Applications, 307 (2005), 415–432.
Strong solutions to a class of air quality models. C. R. Acad. Sci. Paris, Sér. I Math. 339 (2004), 843–847.
- S. Gaucel, M. Langlais, D. Pontier. *Invading introduced species in insular heterogeneous environments*. Ecological Modeling, 18 (2005), 62–75.
- W.E. Fitzgibbon, M. Langlais, F. Marpeau, J.J. Morgan. *Modeling the circulation of a disease between two host populations on non coincident spatial domains*. Biol. Invasions, 7 (2005), 863–875.
- T. Aliziane, M. Langlais. *Global existence and asymptotic behaviour for a degenerate diffusive SEIR model*. Electron. J. Qual. Theory Differ. Equ. 2 (2005), 1–15. (electronic).
- F.M. Hilker, M.A. Lewis, H. Seno, M. Langlais, H. Malchow. *Pathogens can slow down or reverse invasion fronts of their hosts*. Biol. Invasions, 7 (2005) 817–832.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *A reaction-diffusion system modeling direct and indirect transmission of a disease*. Discrete Contin. Dyn. Syst. B, 4, (2004), 893–910.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *A Reaction-Diffusion system on non coincident spatial domains modeling the circulation of a disease between two host populations*. Differential and Integral Equations, 17, (2004), 781–802.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan, D. Pontier, C. Wolf. *An age-dependent model describing the spread of panleucopenia virus within feline populations*. Mathematical modelling of population dynamics, 197–207, Banach Center Publ., 63, Polish Acad. Sci., Warsaw, (2004).
- B. Ainseba, S. Anița, M. Langlais. *On the optimal control problem for a nonlinear age-structured population dynamics model*. Electronic Journal of Differential Equations, 28 (2003), 1–9.
- L. Allen, M. Langlais, C. Phillips. *The dynamics of two viral infections in a single host population with application to hantavirus*. Math. Biosciences, 186 (2003), 191–217.
- E. Fromont, M. Langlais, D. Pontier. *Disease propagation in connected host populations with density-dependent dynamics: the case of Feline Leukemia Virus*. J. Theor Biology, 223 (2003), 465–475.
- M. Langlais, G. Latu, J. Roman, P. Silan. *Performance Analysis and qualitative results of an efficient parallel stochastic simulator for a marine host-parasite system*. Concurrency and Computation: practice and experience, 15 (2003), 1133–1150.
- N. Bahi-Jaber, M. Langlais et D. Pontier. *Behavioral plasticity and virus propagation: the FIV-cat population example*. Theor. Popul. Biol., 64/1 (2003) 11–24.
- S. Gaucel, M. Langlais. *Some mathematical problems arising in heterogeneous insular ecological models*. Rev. R. Acad. Cien. Serie A. Math., 96 (2003), 389–400.
- M. Langlais, F. Milner. *Existence and uniqueness of solutions for a diffusion model of host-parasite dynamics*. J. Math. Anal. and Applications, 279 (2003), 463–474.

- W-E. Fitzgibbon, M. Langlais. *A diffusive S.I.S. model describing the propagation of F.I.V.* Communications of Applied Analysis, 7 (2003), 387-403.
- M. Bendhamane, M. Langlais, M. Saad. *On some anisotropic reaction-diffusion systems with L^1 -data modeling the propagation of an epidemic disease.* Nonlinear Analysis, Series A, Theory and Methods, 54 (2003), 617-636.
- F. Sauvage, M. Langlais, N.G. Yoccoz, D. Pontier. *Modelling Hantavirus in cyclic bank voles: the role of indirect transmission on virus persistence.* Journal of Animal Ecology, 72(1) (2003) 1-13.
- M. Langlais, J.M. Naulin. *An age structured S.I. epidemic problem in a heterogeneous environment.* Iannelli, M. (ed.), Evolution equations: applications to physics, industry, life sciences and economics (Levico Terme, 2000), Progr. Nonlinear Differential Equations Appl., 55, Birkhäuser, Basel, (2003), 307-321.
- M. Langlais, G. Latu, J. Roman, P. Silan. *Stochastic simulation of a marine host-parasite system using a hybrid OpenMP/MPI programming.* Monien, Burkhard (ed.) et al., Euro-Par 2002 Parallel processing. 8th international Euro-Par conference, Paderborn, Germany, August 27-30, 2002. Proceedings. Berlin: Springer. Lect. Notes Comput. Sci. 2400 (2002), 436-446.
- B. Ainseba, S. Anița, M. Langlais. *Internal stabilizability of some diffusive models.* J. Math. Anal. and Applications, 265 (2002), 91-102.
- B. Ainseba, W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *An application of homogenization techniques to population dynamics models.* Communications in Pure and Applied Analysis, 1 (2002), 19-33.
- M. Bendhamane, M. Langlais, M. Saad. *Existence of solutions for reaction-diffusion systems with L^1 -data.* Advances in Differential Equations, 7 (2002), 743-768.
- B. Ainseba, F. Heiser, M. Langlais. *A mathematical analysis of a predator-prey system in a highly heterogeneous environment.* Differential and Integral Equations, 15 (2002), 385-404.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *A mathematical model of the spread of Feline Leukemia Virus (FeLV) through a highly heterogeneous spatial domain.* SIAM J. Math. Analysis, 33 (2001), 570-588.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *Martin's problem for systems with compartmental diffusion.* J. of the Egyptian Mathematical Society, 9 (2001), 59-67.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *Modeling the Spread of Feline Leukemia Virus in Heterogeneous Habitats.* Faria, Teresa (ed.) et al., Topics in functional differential and difference equations (Lisbon, 1999), Fields Inst. Commun., 29, Amer. Math. Soc., Providence, RI, (2001), 133-146.
- B. Ainseba, M. Langlais. *On a population dynamics control problem with age dependence and spatial structure.* J. Math. Anal. and Applications, 248 (2000), 455-474.
Sur le contrôle d'une population structurée en âge et en espace, Comptes rendus Acad. Sci. Paris, t.323 série I, (1996), 269-274.
- Ch. Suppo, J-M. Naulin, M. Langlais, M. Artois. *Vaccination and sterilization programs for rabies control in fox populations.* Proc. R. Soc. London, série B, 267 (2000), 1575-1582.
- F. Courchamp, M. Langlais, G. Sugihara. *Rabbits killing birds: modelling the hyperpredation process.* Journal of Animal Ecology, 69 (2000), 154-164.
- W.E. Fitzgibbon, M. Langlais. *Weakly coupled hyperbolic systems modeling the circulation of infectious disease in structured populations.* Mathematical Biosciences, 165 (2000), 79-95.
- K. Berthier, M. Langlais, P. Auger, D. Pontier. *Dynamics of a feline virus with two transmission modes within exponentially growing host populations.* Proc. R. Soc. London, série B, 267 (2000), 2049-2056.
- M. Langlais et Ch. Suppo. *A remark on a generic SEIRS model and application to cat retroviruses and fox rabies.* Mathematical and Computer Modelling, 31 (2000), 117-124.

- M. Langlais, G. Latu, J. Roman, P. Silan. *Parallel simulation of a marine host parasite system*. “EU-ROPAR’99 Parallel Processing”, Lecture Notes in Computer Sciences 1685 (1999), 677-685.
- F. Courchamp, M. Langlais, G. Sugihara. *Cats protecting birds: modelling the mesopredator release effect*. Journal of Animal Ecology, 66 (1999), 282-292.
- F. Courchamp, M. Langlais, G. Sugihara. *Control of rabbits to protect island birds from cat predation*. Journal of Biological Conservation, 89 (1999), 219-225.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *Eventually uniform bounds for a class of quasipositive Reaction Diffusion systems*. Japan J. Ind. Appl. Math., 16 (1999), 225-241.
- C. Bouloux, M. Langlais, P. Silan. *A marine host-parasite model with direct biological cycle and age structure*. Ecological Modelling, 107 (1998), 73-86.
- E. Fromont, D. Pontier, M. Langlais. *Dynamics of a feline retrovirus (FeLV) in hosts populations with variable structure*. Proc. R. Soc. London, série B, 265 (1998), 1097-1104.
- M. Artois, M. Langlais, Ch. Suppo. *Simulation of fox rabies control within an increasing fox population*. Ecological Modelling, 97 (1997), 23-34.
- E. Fromont, M. Artois, M. Langlais, F. Courchamp, D. Pontier. *Modelling the feline leu-kemia virus (FeLV) in natural populations of cats (Felis catus)*. Theor. Popul. Biol., 52 (1997), 60-70.
- M. Langlais, S. Busenberg. *Global behavior in age-structured SIS models with seasonal periodicities and vertical transmission*. J.Math.Anal. and Applications, 213 (1997), 511-533.
- W.E. Fitzgibbon, M. Langlais. *Diffusive SEIR models mith logistic population control*. Commun. Appl. Nonlinear Anal., 4 (1997), 1-16.
- W.E. Fitzgibbon, M. Langlais, M.E. Parrott, G.F. Webb. *A diffusive system with age dependence modelling FIV*. Nonlinear Analysis T.M.A., 25 (1995), 975-989.
- M. Langlais, P. Silan. *Theoretical and mathematical approach of someregulation mechanisms in a marine host-parasite system*. J. Biological Systems, 3 (1995), 559-568.
- F. Courchamp, D. Pontier, M. Langlais, M. Artois. *Population dynamics of Feline Immunodeficiency Virus within populations of cats*. J. Theoretical Biology, 175 (1995), 553-560.
- M. Kubo, M. Langlais. *Periodic solutions for non-linear population dynamics models with age- dependence and spatial structure*. J. Differential Equations, 109 (1994), 274-294.
Solutions périodiques pour un problème de dynamique des populations. Comptes-Rendus Acad. Sci. Paris, t.313, série I, (1991), 387-390.
- M. Langlais. *Global behavior of epidemics models in age-structured populations*. RIMS Kokyuroku 870 (1994), 86-94.
- F. Milner, M. Langlais. *Separable solutions of an age dependent population model with age dominance and their stability*. Mathematical Biosciences. 119 (1994), 115-125.
- T. Lafaye, M. Langlais. *Analyse de deux modèles déterministes SIRS avec dépendance en âge*. Comptes-Rendus Acad.Sci.Paris, t.316, série I, (1993), 347-350.
- T. Lafaye, M. Langlais. *Threshold methods for threshold models in age-dependent population dynamics and epidemiology*. Calcolo, 29, (1993), 49-79.
- P. Fabrie, M. Langlais. *Mathematical analysis of a miscible displacement in porous media*. SIAM J. Math. Anal., 23, (1992), 1375-1392.
- M. Kubo, M. Langlais. *Periodic solutions for a population dynamics problem with age-dependence and spatial structure*. J. Math. Biol., 29 (1991), 363-378.

- M. Langlais *Generalized solutions of monotone and semilinear parabolic equations*. Monatshefte für Mathematik, 110 (1990), 117-136.
- P. Fabrie, B. Goyeau, M. Langlais. *Sur un modèle de déplacement non isotherme en milieux poreux*. Comptes Rendus Acad. Sci. Paris, t.111, série I (1990), 707-710.
- J.F. Colombeau, M. Langlais. *Generalized solutions of nonlinear parabolic equations with distributions as initial conditions*. J. Math. Anal. Appl., 145 (1990), 186-196.
Existence et unicité de solutions d'équations paraboliques nonlinéaires avec conditions initiales distributions. Comptes-Rendus Acad. Sci. Paris, t.302, série I (1986), 379-382.
- M. Langlais *Large time behavior in a nonlinear age-dependent population model with spatial diffusion*. J. Math. Biol., 26 (1988) 319-346.
- M. Langlais *A nonlinear problem in age-dependent population diffusion*. SIAM J. Math. Anal., 16 (1985), 510-529.
- M. Langlais *On the continuous solutions of a degenerate elliptic equation*. Proceedings of London Math. Soc., 50 (1985) 282-298.
Boundary behavior of solutions of some degenerate diffusion equations. Differential equations, Proc. Conf., Birmingham/Ala. 1983, North-Holland Math. Stud. 92 (1984) 381-386.
- M. Langlais, D. Phillips. *Stabilization of solutions of nonlinear evolution equations*. Nonlinear Analysis T.M.A., 9 (1985) 321-333.
Stabilization of solutions of nonlinear evolution equations. Physical mathematics and nonlinear partial differential equations, Proc. Conf., Morgantown/W. Va. 1983, Lect. Notes Pure Appl. Math. 102 (1985), 223-228.
- M. Langlais, M.N. Le Roux. *Convergence d'un schema numérique pour un problème de valeurs propres elliptique nonlinéaire*. Comptes-Rendus Acad. Sci. Paris, t.300, série A (1985), 561-563.
- M. Langlais *A problem in nonlinear age-dependent population diffusion*. Population biology, Proc. int. Conf., Edmonton/Can. 1982, Lect. Notes Biomath. 52 (1983), 180-185.
- M. Langlais *On a linear age-dependent population diffusion model*. Quaterly of Appl. Math., 40 (1983), 447-460.
- M.G. Garroni, M. Langlais. *Age-dependent population diffusion with external constraints*. J. Math. Biol., 14 (1982), 77-94.
- M. Langlais *A degenerating elliptic problem with unilateral constraints*. Nonlinear Analysis T.M.A., 2 (1980) 329-342.
Sous-solutions d'un problème unilatéral dégénéré: caractérisation et estimation. Comptes-Rendus Acad. Sci. Paris, t.287, série A (1978) 857-860.
- M. Langlais *Solutions fortes pour une classe de problèmes aux limites dégénérées*. Com. Part. Dif. Eq., 8 (1979) 869-897.
Résultats d'existence de solutions fortes et régularité pour des problèmes aux limites du second ordre dégénérés. Comptes-Rendus Acad. Sci. Paris, t.286, série A (1978) 591-593.
- M. Langlais *Sur un problème d'évolution singulier*. Comptes-Rendus Acad. Sci. Paris, t.278, série A (1974) 1611-1614.

3 Book chapters, thesis manuscripts

- P. Ezanno, E. Vergu, M. Langlais, E. Gilot-Fromont. *Modelling the dynamics of host-parasite interactions: basic principles*. Chapter 5 p. 79-101 in: Morand S., Beaudeau F., Cabaret J., de Rycke J. (Eds), New frontiers of Molecular Epidemiology of Infectious Diseases. (2012) Springer.

- W.E. Fitzgibbon, M. Langlais. *Simple Models for the Transmission of Microparasites Between Host Populations Living on non Coincident Spatial Domains*. Chapitre 3 p. 115-164 in: P. Magal, S. Ruan (Eds), *Structured Population Models in Biology and Epidemiology*, Lecture Notes in Mathematics (Mathematical Biosciences Subseries) vol. 1936, (2008), Springer.
- M. Langlais. *L'épidémiologie humaine: conditions de son développement en France et rôle des mathématiques*, RST 23 Académie des Sciences, animateur A.-J. Valleron, EDP Sciences, (2006); sous-chapitre 4.4, section 3 essentiellement.
- M. Langlais *Modèles de dynamique des population avec dépendance en âge et structuration en espace*. "La modélisation; confluent des Sciences", Editions du CNRS, (1990), 125-140.
- M. Langlais *Sur une classe de problèmes aux limites dégénérés et quelques applications*. Thèse d'état, Univ. Bordeaux I, 1981.
- M. Langlais *Sur un problème d'évolution singulier*. Thèse de troisième cycle, Univ. Bordeaux I, 1974.

4 Miscellaneous

- J.B. Burie, M. Langlais, A. Calonnec. *Effect of Crop Growth and Susceptibility on the Dynamics of a Plant Disease Epidemic: Powdery Mildew of Grapevine*. In Li, B., Guo, Y., Jaeger, M. (Eds) *The Third International Symposium on Plant Growth Modeling, Simulation, Visualization and Applications (PMA 09)*, Beijing, China. IEEE Computer Society Los Alamitos, (2010), 119-122.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *Mathematical Models for the Spread of Infectious Disease*, Numerical Analysis and Scientific Computing for Partial Differential Equations and Their Challenging Applications (eds. J. Haataja, R. Stenberg, J. Periaux, R. Raback, P. Neittaanmaki), International Center for Numerical Methods Engineering (CIMNE), Barcelona, (2008), 153-170.
- M. Langlais. *Des tumeurs rebelles modélisées*, La Recherche, octobre 2006, p.29.
- G. Latu, J. Roman, P. Silan et M. Langlais. *Simulation "réaliste" d'un problème d'épidémiologie et d'écologie sur 448 processeurs*. Lettre d'information du CINES, 15/16 (2003), 5-8.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *Convergence of an iterative scheme for a prototypical atmospheric advection reaction diffusion system*. Proceedings of "Numerical methods for scientific computing, variational problems and applications", E. Heikola, Y. Kuznetsov, P. Neittaanmaki and O. Pironneau (Eds), World Scientific (Singapore), (2003), 90-102.
- W.E. Fitzgibbon, M. Langlais, J.J. Morgan. *Epidemic models with compartmental diffusion*. Elliptic and parabolic problems (Rolduc/Gaeta, 2001, World Sci. Publishing, River Edge, NJ, (2002), 389-398.
- M. Artois, S. Rossi, E. Fromont, M. Langlais, J.-M. Naulin, D. Pontier *Dynamique des populations de virus, gestion sanitaire et conservation des carnivores*, Actes du congrès francophone de Mammalogie ARVICOLA (1999), Maisons-Alfort (2001), 87-91.
- D. Pontier, F. Courchamp, E. Fromont et M. Langlais. *L'impact de la présence du chat sur les populations d'oiseaux insulaires est-il uniquement négatif ?* Rapport d'activité de l'Institut Français de la Recherche et de la Technologie Polaire. (1999), 38-43.
- E. Fromont, D. Pontier, M. Langlais. *Un modèle mathématique pour la propagation d'une infection virale chez le chat*. Actualité de la recherche, CNRS Info, 362, (1999), 8-9.
- M. Langlais, G. Latu, J. Roman et P. Silan. *Simulation numérique parallèle d'un système hôte-parasite*. Lettre d'Information du CNUSC, 69 (1999), 2-3.
- E. Fromont, D. Pontier et M. Langlais. *Les maths au service du chat*. Le journal du CNRS, décembre 1998, Labos en direct, (1999), p. 28.

- M. Langlais, G. Latu, P. Silan. *Dynamique des populations de monogènes, ectoparasites de téléostéens: stratégies démographiques et implications mathématiques*. *Ecologie*, 30 (1999), 247-260.
- E. Fromont, C.H. Cohen, F. Courchamp, M. Artois, M. Langlais, D. Pontier. *Infection strategies of three feline viruses and epidemiological consequences*. *Ecologie*, 30, 1999, 221-230.
- W.E. Fitzgibbon, M. Langlais. *The description of the geographic spread of infectious disease*. Bristeau, M.-O. (ed.) et al., *Computational science for the 21st century. Dedicated to Prof. Roland Glowinski on the occasion of his 60th birthday*. Symposium, Tours, France, May 5-7, 1997. Chichester: John Wiley & Sons. (1997), 791-799 .
- P. Silan, M. Langlais, C. Bouloux. *Dynamique des populations et Modélisation : application aux systèmes hôtes-macroparasites et à l'épidémiologie en Environnement Marin*. Tendances nouvelles en modélisation pour l'environnement. C.N.R.S. eds, (1997), 303-310.
- M. Langlais, S. Busenberg. *Global behavior in age-structured SIS models with seasonal periodicities*. Martelli, Mario (ed.) et al., *Differential equations and applications to biology and to industry* (Claremont, CA, 1994), World Sci. Publishing, River Edge, NJ, (1996), 281-287.
- S. Busenberg, M. Langlais, F. Milner. *Non-unique positive steady-states in population dynamics and epidemics models and their stability*. Martelli, Mario (ed.) et al., *Differential equations and applications to biology and to industry* (Claremont, CA, 1994), World Sci. Publishing, River Edge, NJ, (1996), 369-383.
- M. Langlais. *A mathematical analysis of the SIS intracohort model with age-structure*. "Mathematical Population Dynamics : Analysis of heterogeneities", vol.1, O.Arino, D.Axerod, M.Kimmel et M. Langlais ed. Wuerz Publishing Ltd, (1995), 103-117.
- M. Kubo, M. Langlais. *Periodic solutions for population dynamics models with periodic supply*. Bandle, C. (ed.) et al., *Progress in partial differential equations: calculus of variations, applications* (Pont--Mousson, 1991), Pitman Res. Notes Math. Ser., 267, Longman Sci. Tech., Harlow, (1992), 214-220.
- M. Langlais. *Remarks on an epidemic model with age structure*. *Mathematical population dynamics*, Proc. 2nd Int. Conf., New Brunswick/NJ (USA) 1989, Lect. Notes Pure Appl. Math. 131(1991), 75-92 .
- M. Langlais. *Asymptotic behavior in some evolution equations arising in population dynamics*. *Recent advances in nonlinear elliptic and parabolic problems* (Nancy, 1988), Pitman Res. Notes Math. Ser., 208, Longman Sci. Tech., Harlow, (1989), 77-86 .
- M. Langlais. *Longtime behavior in some simple aged-structured population dynamics models*. *Probleme der angewandten Statistik*. 24-26 (1988), 76-83.
- M. Langlais. *Stabilization in a nonlinear age dependent population model*. *Biomathematics and related computational problems* (Naples, 1987), Kluwer Acad. Publ., Dordrecht, (1988), 337-344.
- M. Langlais, D. Phillips. *Sur une classe de problèmes d'évolution non linéaires et dégénérés*. *Journ. Equ. Dériv. Partielles*, St.-Jean-De-Monts 1984, Conf. No.2, 12 p. (1984).
- M. Langlais. *Equations d'évolution dégénérées*. *Journ. Equ. Dériv. Partielles*, Saint-Jean-de-Monts 1980, Exp. No.16, 3 p. (1980).
- M. Langlais. *Un problème unilatéral dégénéré*. *Recent methods in non-linear analysis*, Proc. int. Meet., Rome 1978, (1979), 441- 454.
- M. Langlais. *Solutions fortes et régularité pour une classe de problèmes aux limites dégénérés*. *Sémin. Goulaouic-Schwartz 1977-1978*, *Equat. dériv. part. Anal. fonct.*, Exposé No.7, 15 p. (1978).