

**Biomathematics and Statistics Working Group
Centro de Matemática, Aplicações Fundamentais
e Investigação Operacional (CMAF-CIO)
Science Faculty, Lisbon University**

Papers in refereed International Journals (2008-2015)

Mateus, L., Ghaffari, P., Skwara, U., Rocha, F., Aguiar, M., Masoero, D., & Stollenwerk, N. (2015). Semiclassical approximations of stochastic epidemiological processes towards parameter estimation using as prime example the SIS system with import. Accepted to be published in *Ecological Complexity*. (IF: 2.857)

Aguiar, M. (2015). Scaling up complexity in host-pathogens interaction models. Accepted to be published in *Physics of Life Reviews*. (IF: 9.478)

Aguiar, M., Coelho, G.E., Mateus, L., Rocha, R., Pessanha, J.E.M., Mateus, L. & Stollenwerk, N. (2015). Dengue transmission during the 2014 FIFA World Cup in Brazil . *The Lancet Infectious Diseases* , 10, 765-766. (IF: 19.446)

F. Rocha, Mateus, L., U. Skwara, M. Aguiar & N. Stollenwerk. (2015). Understanding dengue fever dynamics: a study of seasonality in vector borne disease models. *International Journal of Computer Mathematics*. In Press. DOI: 10.1080/00207160.2015.1050961 (IF: 0.825)

Stollenwerk, N., Aguiar, M., Mateus, L., Rocha, F., Skwara, U. & Ghaffari, P. (2015). Prediction and predictability in population biology: noise and chaos. *Mathematical Modelling of Natural Phenomena* , 10, 141-164. (IF: 0.725)

Aguiar, M., Rocha, R., Pessanha, J.E.M., Mateus, L. & Stollenwerk, N. (2015). Carnival or football, is there a real risk for acquiring dengue fever in Brazil during holidays seasons. *Nature Scientific Reports* , 5 :8462; DOI:10.1038/srep08462. (IF: 5.578)

Aguiar, M., Paul, R., Sakuntabhai, A. & Stollenwerk, N. (2014). Are we modeling the correct data set? Minimizing false predictions for dengue fever in Thailand. *Epidemiology and Infection* , 142, 2447-59. (IF: 2.535)

Kooi W. B., Aguiar, M. & Stollenwerk, N. (2014). Analysis of an asymmetric two-strain dengue model. *Mathematical Biosciences* , 248, 128-139. (IF: 1.489)

Rocha, F., Aguiar, M., Souza, M. & Stollenwerk, N. (2013). Time scale separation and center manifold analysis describing vector borne diseases dynamics. *International Journal of Computer Mathematics* , 90, 2105-2125. (IF:0.725)

Aguiar, M., Kooi, W.B., Rocha, F., Ghaffari, P. & Stollenwerk, N. (2013). How much complexity is

needed to describe the fluctuations observed in dengue hemorrhagic fever incidence data? *Ecological Complexity* , 16, 31-40 (IF: 2.857)

Kooi W.B., Aguiar, M. & Stollenwerk, N. (2012). Bifurcation analysis of a family of multi-strain epidemiological models. *Journal of Computational and Applied Mathematics* , 252, 148-158. (IF:1.547)

Aguiar, M., Stollenwerk, N. & Kooi, W.B. (2012). Scaling of stochasticity in dengue hemorrhagic fever epidemics. *Mathematical Modelling of Natural Phenomena* , 7, 1-11 . (IF: 0.725)

Stollenwerk, N., Aguiar, M., Ballesteros, S., Boto, J., Kooi, W.B. & Mateus, L. (2012). Dynamic noise, chaos and parameter estimation in population biology. *Interface Focus* , 2, 156-169. (IF: 3.124)

Aguiar, M., Ballesteros, S., Kooi, B.W. & Stollenwerk, N. (2011). The role of seasonality and import in a minimalistic multi-strain dengue model capturing differences between primary and secondary infections: complex dynamics and its implications for data analysis. *Journal of Theoretical Biology* , 289, 181-196. (IF: 2.394)

Martins, J., Aguiar, M., Pinto, A. & Stollenwerk, N. (2011). On the series expansion of the spatial SIS evolution operator. *Journal of Difference Equations and Applications* , 17, 1107-1118. (IF: 0.926)

Aguiar, M. (2011). The effect of global warming on vector-borne diseases: Comment on "Modeling the impact of global warming on vector-borne" infections by E. Massad et al. *Physics of Life Reviews* , 8, 202-203. (IF: 9.478)

Pinto, A., Aguiar, M., Martins, J. & Stollenwerk, N. (2010). Dynamics of epidemiological models. *Acta Biotheoretica*, 58, 381-389. (IF: 1.231)

Stollenwerk, N., van Noort, S. , Martins, J. , Aguiar, M. , Hilker, F. , Pinto, A. & Gomes, G. (2010). A spatially stochastic epidemic model with partial immunization shows in mean field approximation the reinfection threshold. *Journal of Biological Dynamics*, 4, 634-649. (IF: 1.033)

Aguiar, M., Stollenwerk, N. & Kooi, B.W. (2009). Torus bifurcations, isolas and chaotic attractors in a simple dengue model with ADE and temporary cross immunity. *International Journal of Computer Mathematics* , 86, 1867-1877. (IF: 0.825)

Aguiar, M., Kooi, B.W. & Stollenwerk, N. (2008). Epidemiology of Dengue Fever: A Model with Temporary Cross-Immunity and Possible Secondary Infection Shows Bifurcations and Chaotic Behaviour in Wide Parameter Regions. *Mathematical Modelling of Natural Phenomena* , 4, 48-70. (IF: 0.725)

Massad, E., Ma S., Chen, M., Struchiner, J. C., Stollenwerk, N. & Aguiar, M. (2008). Scale-free network of a dengue epidemic. *Applied Mathematics and Computation* , 195, 376-381. (IF: 1.6)